Pioneer sound.vision.soul

Service Manual

TOYOTA

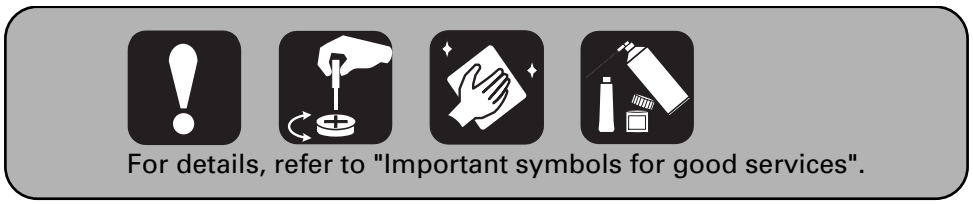
ORDER NO.
CRT2930

LEXUS GX470
AUDIO SYSTEM
CD CHANGER

VEHICLE	DESTINATION	PRODUCED AFTER	TOYOTA PART No.	ID No.	PIONEER MODEL No.
LEXUS GX470	U.S.A., CANADA	November 2002	86270-60070	———	CDX-M8027ZT/E
LAND CRUISER PRADO	Any country or area except for Japan	September 2002	86270-60070	———	CDX-M8027ZT/E
LAND CRUISER PRADO	UNITED KINGDOM, AUSTRALIA, NEW ZEALAND, SOUTH AFRICA	September 2002	86270-60080	———	CDX-M8127ZT/WL

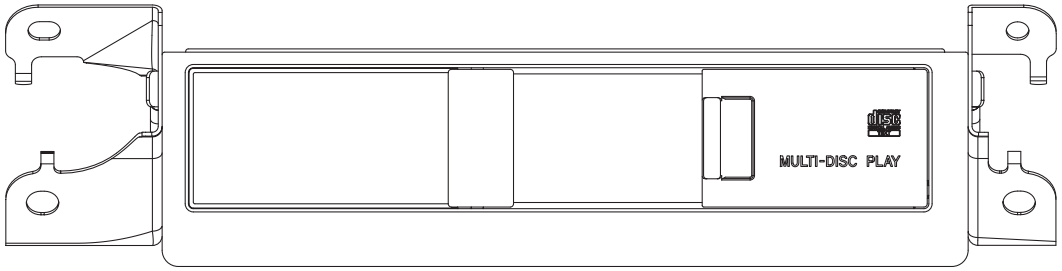
Manufactured for TOYOTA
by PIONEER CORPORATION

PUB. NO. CRT2930



For details, refer to "Important symbols for good services".

CDX-M8127ZT/WL, CDX-M8027ZT/E



● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-652	CRT1857	C5	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

● CD Player Service Precautions

1. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
2. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting pin) by referring to “the DISASSEMBLY” on page 61.
3. After replacing the pickup unit, be sure to check the grating. (See page 46.)
4. The door units CXB8261 and CXB8262 have been engaged each other tightly. When you have to replace the door unit CXB8261 or CXB8262, remove both door units from the Grille to replace them at the same time.

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

1. Safety Precautions for those who Service this Unit.

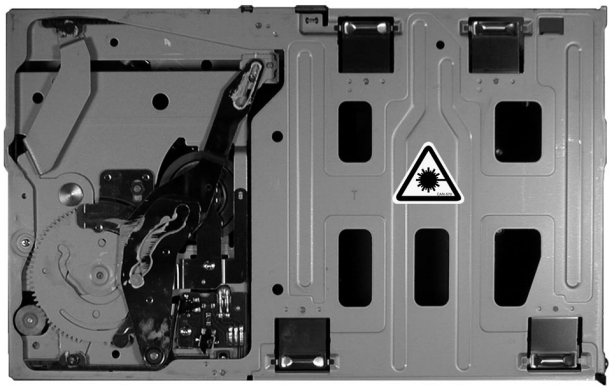
- **Follow the adjustment steps (see pages 45 through 51)in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

Caution:

1. During repair or tests, minimum distance of 13cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

2. A "CLASS 1 LASER PRODUCT" label is affixed to the bottom of the player

3. The triangular label is attached to the mechanism unit frame.



4. Specifications of Laser Diode

Specifications of laser radiation fields to which human access is possible during service.
Wavelength = 785 nanometers
Radiant power = 69.7 microwatts(Through a circular aperture stop having a diameter of 80 millimeters)
0.55 microwatts(Through a circular aperture stop having a diameter of 7 millimeters)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

COMPACT disc DIGITAL AUDIO

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1. SPECIFICATIONS

General

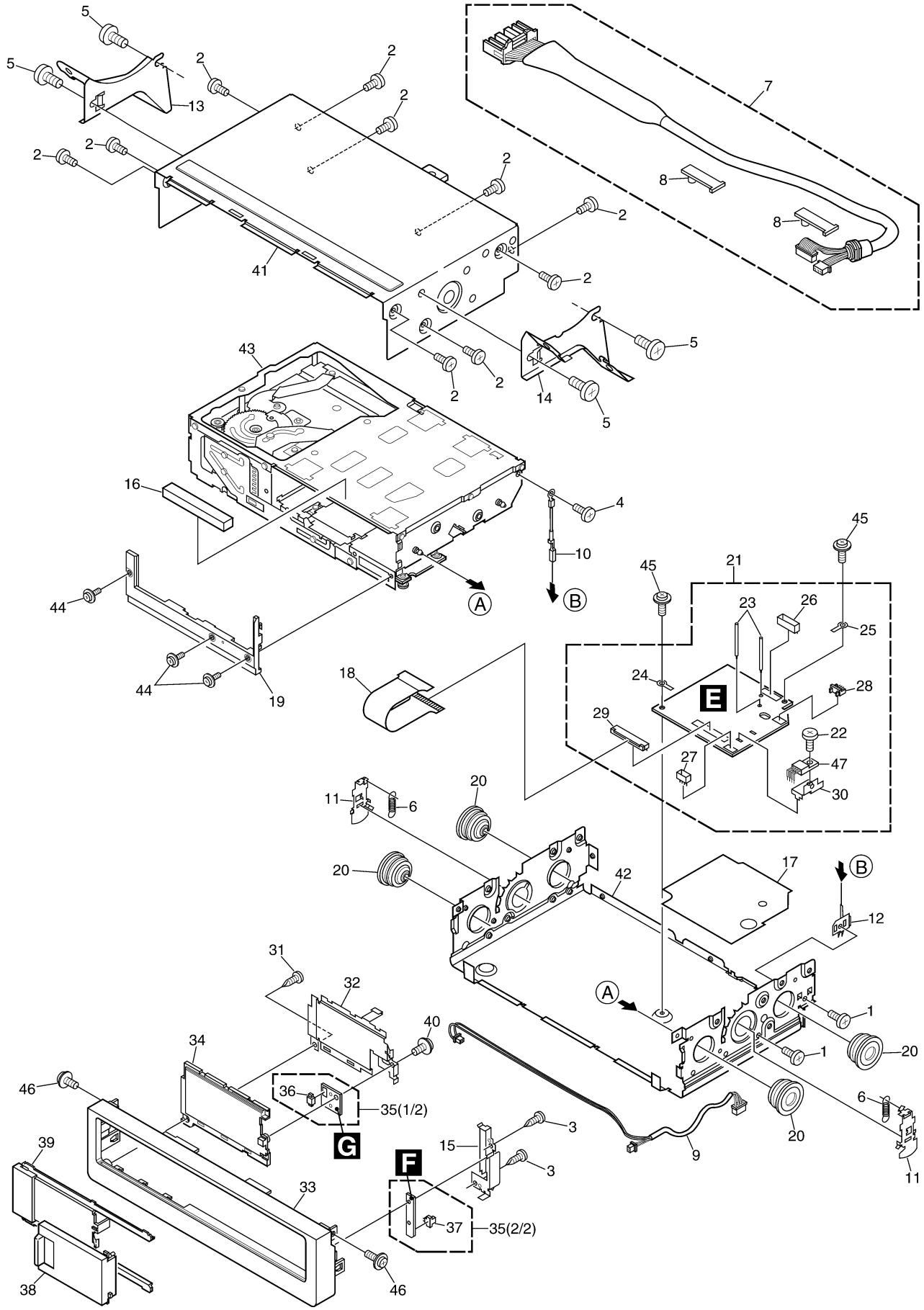
Power source ..... 13.2 V DC (10.5 – 16.0 V allowable)
Grounding system ..... Negative type
Backup current ..... 1.0 mA or less
Dimensions (No including the brackets) ..... 248.2(W) x 66.0(H) x 164.5(D) mm
Weight (CDX-M8127ZT/WL) ..... 2.09 kg
(CDX-M8027ZT/E) ..... 2.05 kg

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format ..... Sampling frequency: 44.1 kHz
Number of quantization bits: 16; linear
Signal-to-noise ratio ..... 85 dB or more
Dynamic range ..... 80 dB or more
Distortion ..... 0.04 % or less
Separation ..... 65 dB or more
Number of channels ..... 2 (stereo)

2. EXPLODED VIEWS AND PARTS LIST

2.1 EXTERIOR (CDX-M8127ZT/WL)



NOTE:

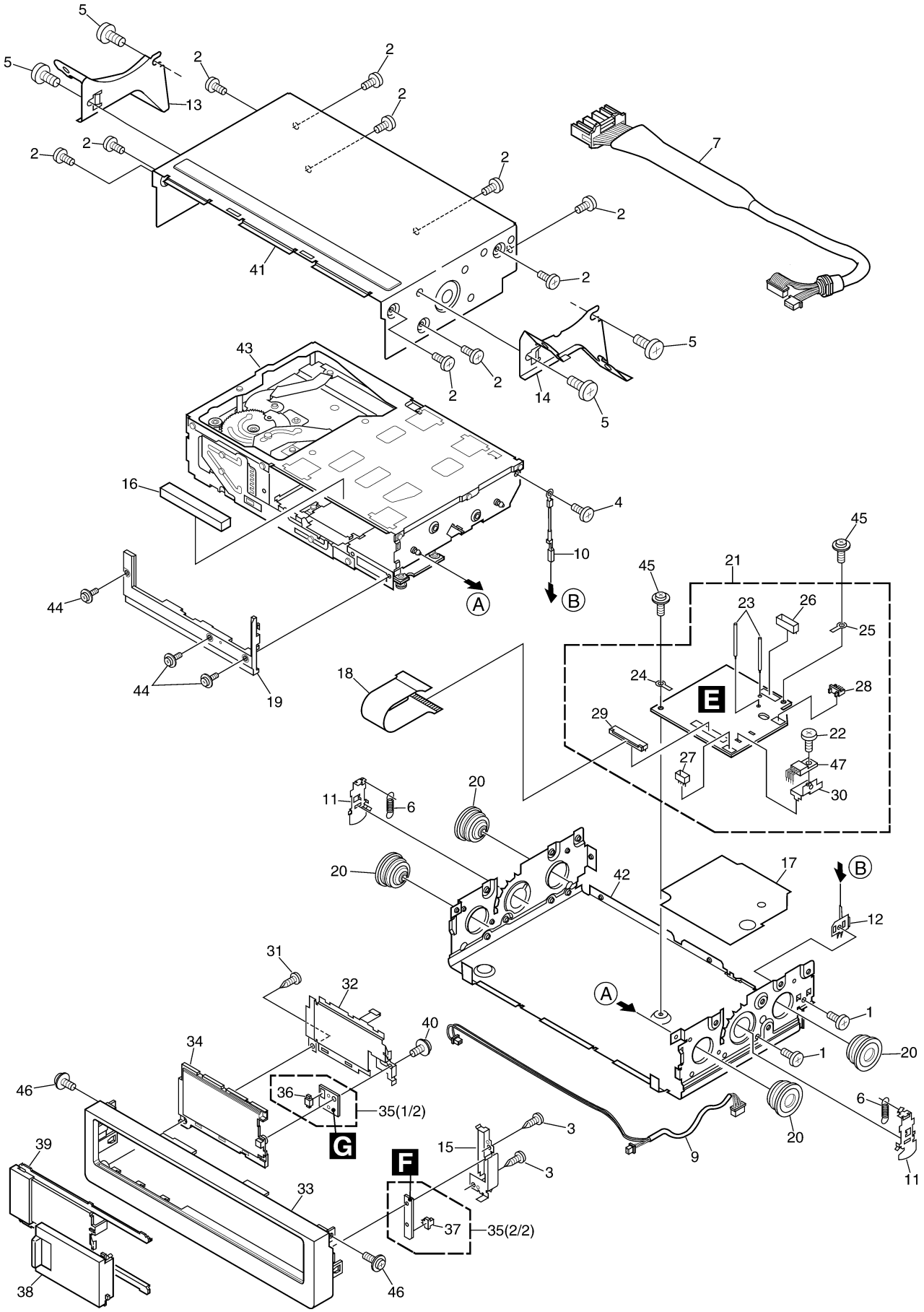
- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

● EXTERIOR (CDX-M8127ZT/WL) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ26P050FMC
	2	Screw	BMZ30P040FMC
	3	Screw	BPZ26P080FMC
	4	Screw(M2x3)	CBA1077
	5	Screw(M5x6)	CBA1517
	6	Spring	CBH1859
	7	Cord Assy	CDE6745
	8	82711-16270	CNV5294
	9	Cord Assy	CDE7111
	10	Cord	CDH1312
	11	Arm	CNC8058
	12	Holder	CNC9721
	13	Bracket	CNC9725
	14	Bracket	CNC9726
	15	Holder	CNC9728
	16	Cushion	CNM7369
	17	Insulator	CNM7845
	18	PCB	CNP4402
	19	Grille	CNS4055
	20	Damper	CNV4501
	21	Extension Unit	CWX2654
	22	Screw	BMZ26P060FMC
	23	Clamper	CEF1008
	24	Terminal(CN991)	CKF1064
	25	Terminal(CN992)	CKF1064
	26	Plug(CN901)	CKS-789
	27	Plug(CN951)	CKS1037
*	28	Plug(CN902)	CKS1237
	29	Connector(CN801)	CKS2233
	30	Holder	CNC9727

Mark	No.	Description	Part No.
	31	Screw	BPZ26P080FMC
	32	Shield	CNC9734
	33	Grille	CNS6861
	34	Panel	CNS6862
	35	Switch Unit	CWM8564
	36	Connector(CN962)	CKS2191
	37	Connector(CN961)	CKS3124
	38	Door Unit	CXB8261
	39	Door Unit	CXB8262
	40	Screw	IMS26P040FMC
	41	Case Unit	CXB8348
	42	Chassis Unit	CXB9987
	43	CD Mechanism Module(C5)	CXK4457
	44	Screw	IMS20P035FZK
	45	Screw	IMS26P040FMC
	46	Screw	IMS30P040FMC
	47	IC(IC921)	BA00AST

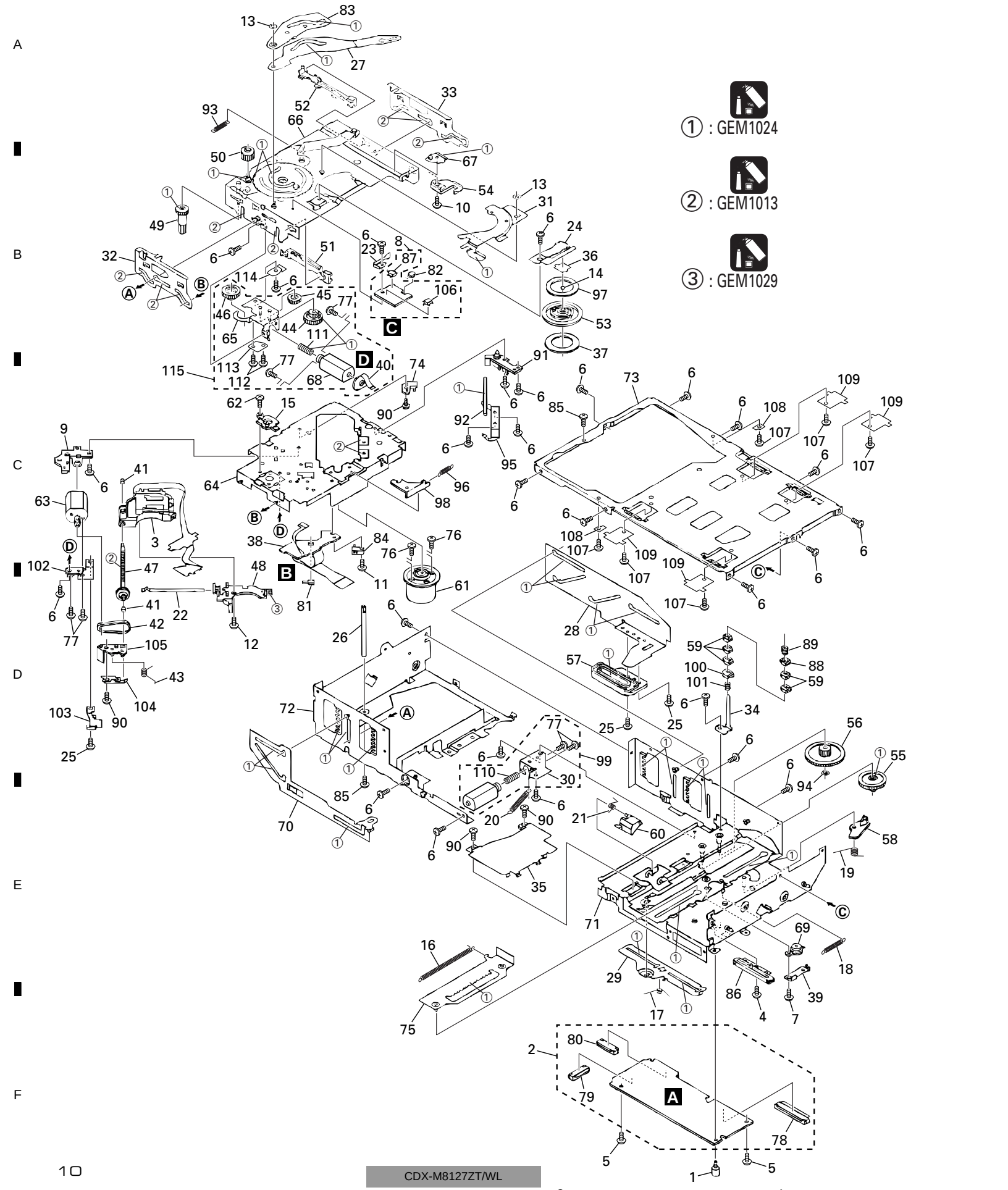
2.2 EXTERIOR (CDX-M8027ZT/E)



● EXTERIOR (CDX-M8027ZT/E) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ26P050FMC
	2	Screw	BMZ30P040FMC
	3	Screw	BPZ26P080FMC
	4	Screw(M2x3)	CBA1077
	5	Screw(M5x6)	CBA1517
	6	Spring	CBH1859
	7	Cord Assy	CDE7066
	8	•••••	
	9	Cord Assy	CDE7111
	10	Cord	CDH1312
	11	Arm	CNC8058
	12	Holder	CNC9721
	13	Bracket	CNC9725
	14	Bracket	CNC9726
	15	Holder	CNC9728
	16	Cushion	CNM7369
	17	Insulator	CNM7845
	18	PCB	CNP4402
	19	Grille	CNS4055
	20	Damper	CNV4501
	21	Extension Unit	CWX2654
	22	Screw	BMZ26P060FMC
	23	Clamper	CEF1008
	24	Terminal(CN991)	CKF1064
	25	Terminal(CN992)	CKF1064
	26	Plug(CN901)	CKS-789
	27	Plug(CN951)	CKS1037
*	28	Plug(CN902)	CKS1237
	29	Connector(CN801)	CKS2233
	30	Holder	CNC9727
	31	Screw	BPZ26P080FMC
	32	Shield	CNC9734
	33	Grille	CNS6861
	34	Panel	CNS6862
	35	Switch Unit	CWM8564
	36	Connector(CN962)	CKS2191
	37	Connector(CN961)	CKS3124
	38	Door Unit	CXB8261
	39	Door Unit	CXB8262
	40	Screw	IMS26P040FMC
	41	Case	CNB2726
	42	Chassis Unit	CXB9987
	43	CD Mechanism Module(C5)	CXK4457
	44	Screw	IMS20P035FZK
	45	Screw	IMS26P040FMC
	46	Screw	IMS30P040FMC
	47	IC(IC921)	BA00AST

2.3 CD MECHANISM MODULE

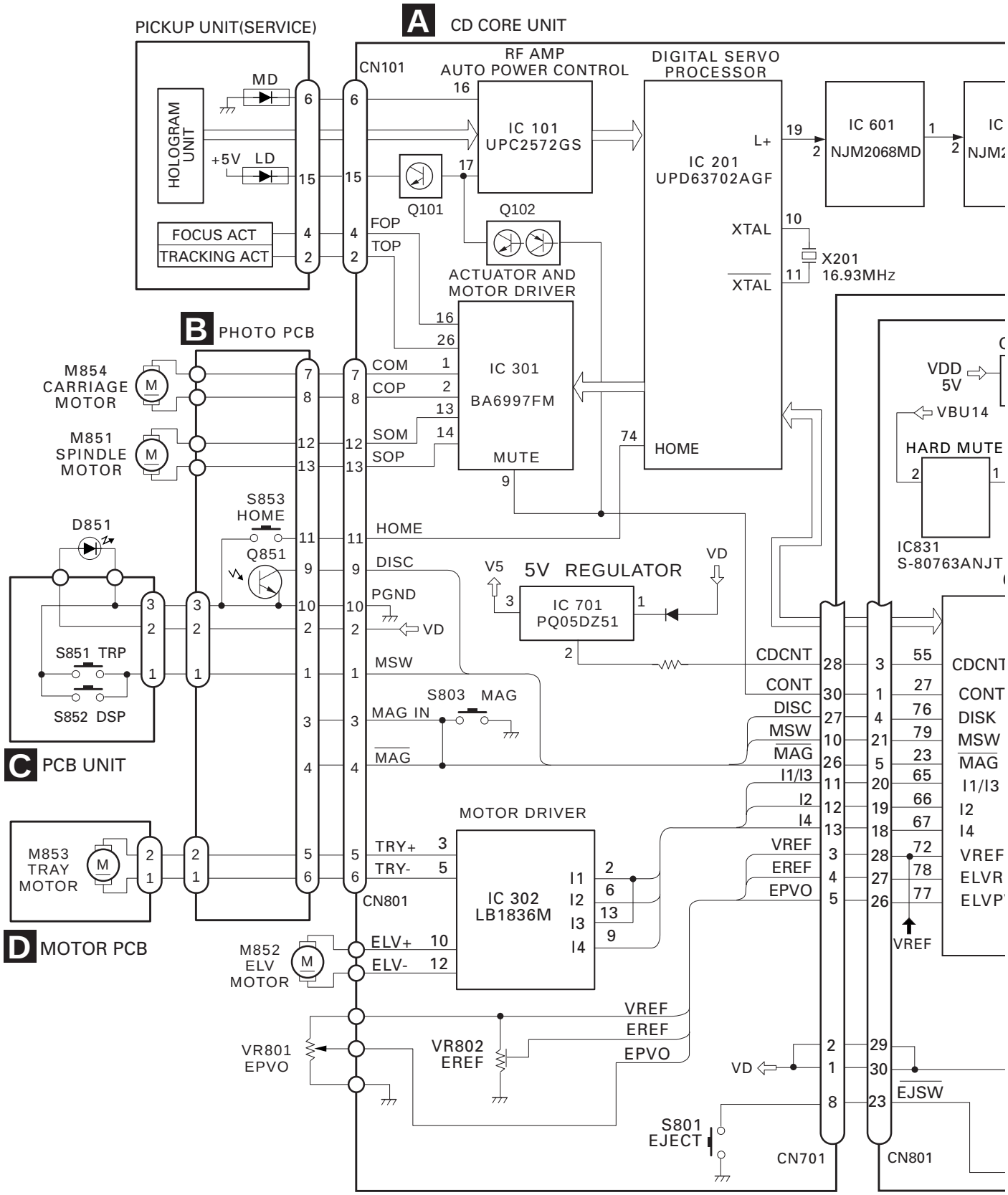


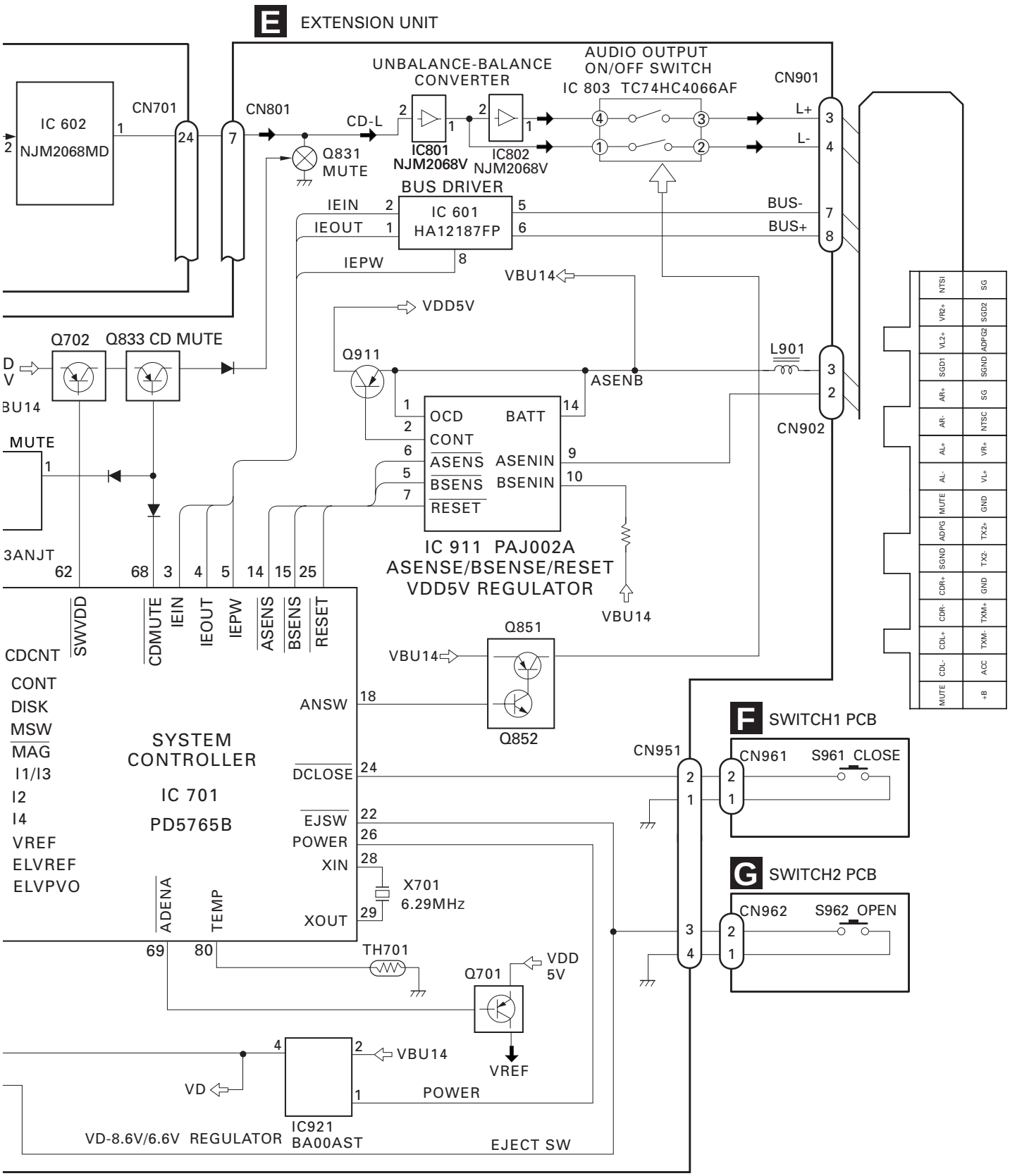
● CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw(M2.6x4)	CBA1426
	2	CD Core Unit	CWX2578
	3	Pickup Unit(Service)	CXX1235
	4	Screw	JFZ17P020FNI
	5	Screw	IMS26P040FMC
	6	Screw(M2x2.5)	CBA1037
	7	Screw(M2x3)	CBA1077
	8	PCB Unit	CWX2599
	9	Holder	CNV5175
	10	Screw(M2x4)	CBA1026
	11	Screw(M2x6)	CBA1166
	12	Screw(M2x4)	CBA1362
	13	Washer	CBF1002
	14	Ball	CNR1189
	15	Guide	CNV5173
	16	Spring	CBH2259
	17	Spring	CBH1827
	18	Spring	CBH1828
	19	Spring	CBH1829
	20	Spring	CBH1830
	21	Spring	CBH1919
	22	Spring	CBL1241
	23	Spring	CBL1242
	24	Spring	CBL1388
	25	Screw(M2x3.5)	CBA1114
	26	Shaft	CLA2803
	27	Arm	CNC6181
	28	Lever	CNC7713
	29	Lever	CNC6194
*	30	Bracket Unit	CXB5838
	31	Lever Unit	CXB7200
	32	Lever	CNC7975
	33	Lever	CNC8097
	34	Holder	CNC7448
	35	Cover	CNC8129
	36	Spacer	CNM4879
	37	Sheet	CNM7576
	38	PCB	CNP4205
	39	Spring	CBL1362
	40	PCB	CNP4382
	41	Bearing	CNR1423
	42	Belt	CNT1053
	43	Spring	CBH2062
	44	Gear	CNV5764
	45	Gear	CNV4404
	46	Gear	CNV4406
	47	Screw Unit	CXB2184
	48	Holder	CNV4950
	49	Gear	CNV5305
	50	Gear	CNV5879
	51	Rail	CNV4419
	52	Rail	CNV4420
	53	Clamper	CNV6929
	54	Lever	CNV4422
	55	Gear	CNV6285
	56	Gear	CNV6242
	57	Rack	CNV4828
	58	Arm	CNV5868
	59	Guide	CNV4597
	60	Arm	CNV6158
	61	Motor Unit(M851)	CXB2187
	62	Screw(M2x2.5)	CBA1085
	63	Motor Unit	CXB1394
	64	Chassis Unit	CXB3530
	65	Bracket Unit	CXB4008
	66	Chassis Unit	CXB7113
	67	Plate Unit	CXB2262
	68	Motor Unit(M853)	CXB5747
	69	Damper Unit	CXA7714
	70	Lever Unit	CXA9141
	71	Magazine Holder Unit	CXB7201
	72	Frame Unit	CXB2265
	73	Frame	CNC9375
	74	Holder	CNV5176
	75	Lever Unit	CXB2266
	76	Screw	JGZ17P025FNI
	77	Screw	JFZ20P025FNI
	78	Connector(CN701)	CKS1968
	79	Connector(CN801)	CKS3484
	80	Connector(CN101)	CKS3486
	81	Photo-transistor(Q851)	PT4800
	82	LED(D851)	CN504-2
	83	Arm	CNC6799
	84	Switch(S853)	CSN1012
	85	Screw(M2x2.5)	CBA1041
	86	Volume(VR801)	CCW1021
	87	Switch(S851)	CSN1052
	88	Guide	CNV4722
	89	Spring	CBH1930
	90	Screw(M2x3)	CBA1154
	91	Holder	CNV5172
	92	Shaft	CLA3274
	93	Spring	CBH2091
	94	Washer	CBF1038
	95	Bracket	CBL1346
	96	Spring	CBH2077
	97	Plate	CNC6847
	98	Plate	CNV4402
	99	Motor Unit(M852)	CXB3931
	100	Guide	CNV5193
	101	Spring	CBH2070
	102	Bracket	CNC7425
	103	Holder	CNC7941
	104	Spring	CBL1348
	105	Holder	CNV5178
	106	Switch(S852)	CSN1051
	107	Screw(M2x1.4)	CBA1387
	108	Spring	CBL1364
	109	Spring	CBL1307
	110	Gear	CNV6240
	111	Gear	CNV6241
	112	Screw(M2x2)	CBA1250
	113	Bracket Unit	CXB5749
	114	Spring	CBL1363
	115	Motor Assy(M854)	CXB5882

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

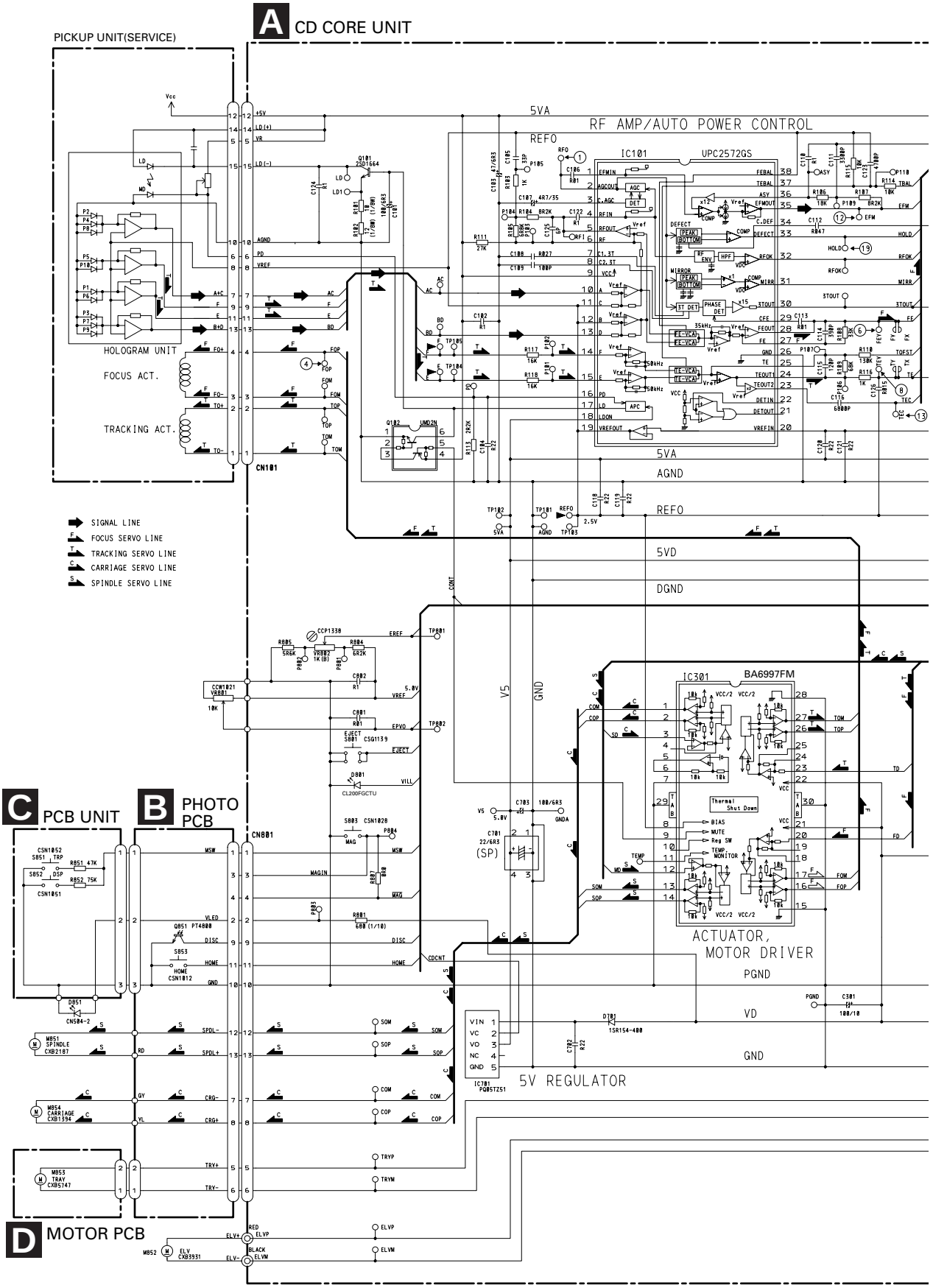
3.1 BLOCK DIAGRAM

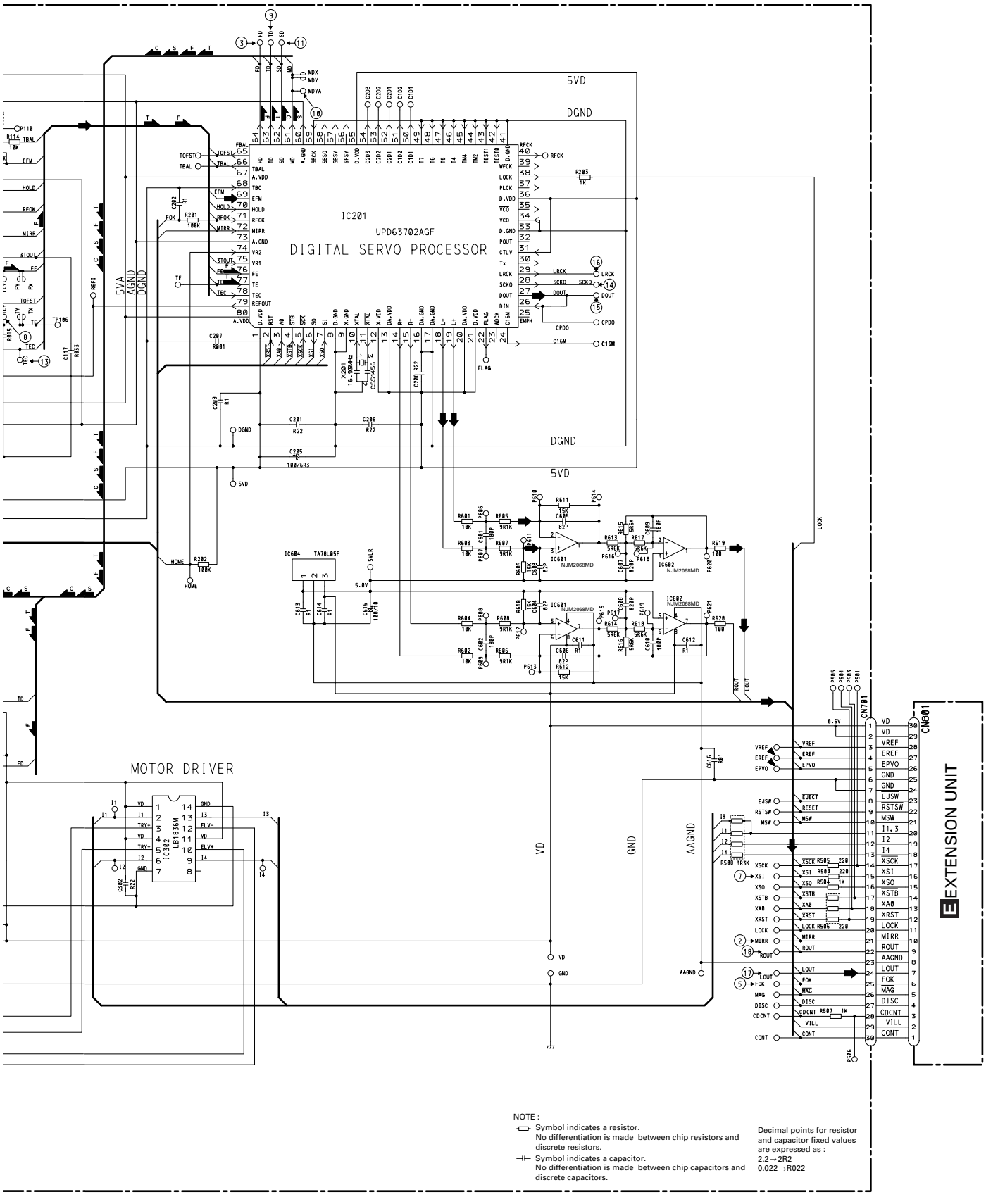



E EXTENSION UNIT
IC 602
NJM2068MD
CN701
CN801
CD-L
Q831
MUTE
UNBALANCE-BALANCE
CONVERTER
IC801
NJM2068V
IC802
NJM2068V
AUDIO OUTPUT
ON/OFF SWITCH
IC 803 TC74HC4066AF
CN901
L+
L-
BUS DRIVER
IC 601
HA12187FP
IEIN
IEOUT
IEPW
BUS-
BUS+
VBU14
VDD5V
Q702
Q833 CD MUTE
Q911
ASENB
L901
CN902
MUTE
OCD
BATT
CONT
ASENS
ASENIN
BSENS
BSENIN
RESET
IC 911 PAJ002A
ASENSE/BSENSE/RESET
VDD5V REGULATOR
Q851
Q852
SYSTEM
CONTROLLER
IC 701
PD5765B
CDCNT
CONT
DISK
MSW
MAG
I1/I3
I2
I4
VREF
ELVREF
ELVPVO
SWVDD
CDMUTE
IEIN
IEOUT
IEPW
ASENS
BSENS
RESET
ANSW
DCLOSE
EJSW
POWER
XIN
XOUT
ADENA
TEMP
X701
6.29MHz
TH701
Q701
VDD
5V
VREF
VD
POWER
IC921
BA00AST
VD-8.6V/6.6V REGULATOR
EJECT SW
F SWITCH1 PCB
CN951
CN961
S961 CLOSE
G SWITCH2 PCB
CN962
S962 OPEN

3.2 OVERALL CONNECTION DIAGRAM

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".





NOTE :

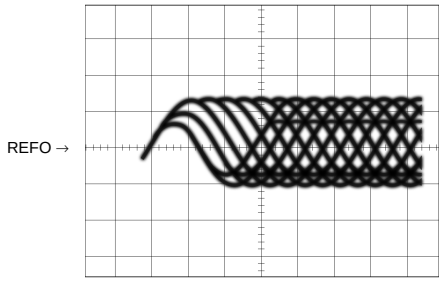
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

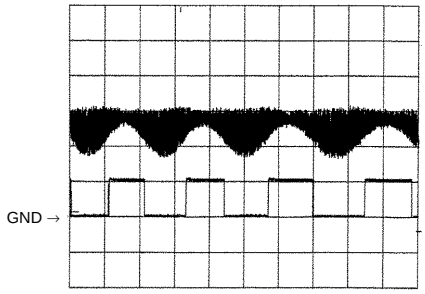
Note:1. The encircled numbers denote measuring pointes in the circuit diagram.
2. Reference voltage
REFO:2.5V

● Waveforms

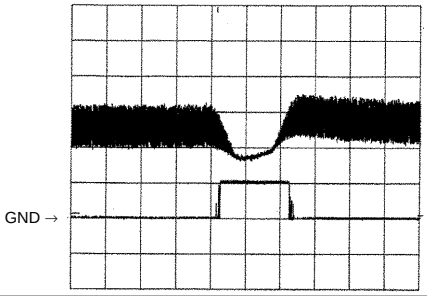
① RFO 0.5V/div. 0.5µs/div.
Normal mode: play



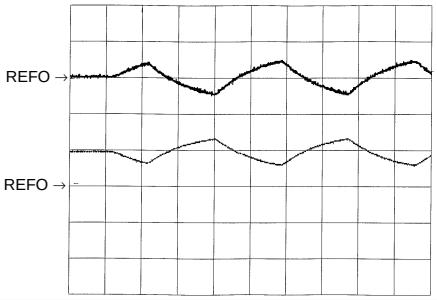
① CH1: RFO 1V/div. 0.5ms/div.
② CH2: MIRR 5V/div.
Test mode: Tracking open



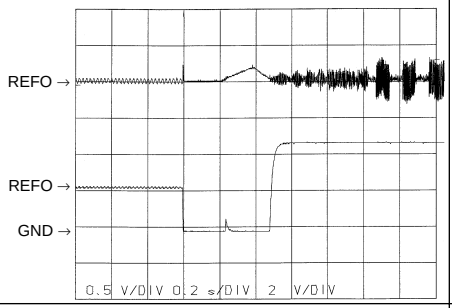
① CH1: RFO 1V/div. 0.5ms/div.
② CH2: MIRR 5V/div.
Normal mode: The defect part passes 800µm



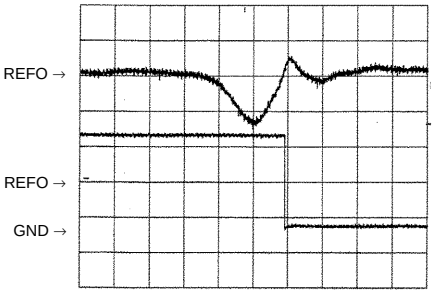
③ CH1: FD 0.5V/div. 0.2s/div.
④ CH2: FOP 2V/div.
Test mode: No disc, Focus close



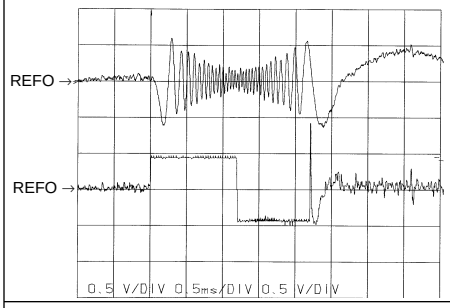
③ CH1: FD 0.5V/div. 0.2s/div.
⑤ CH2: FOK 2V/div.
Normal mode: Focus close



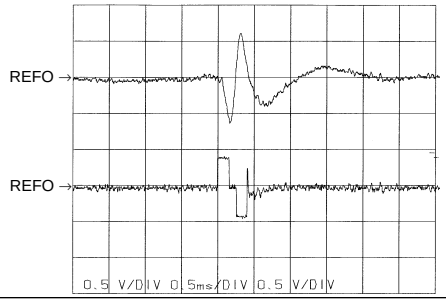
⑥ CH1: FEY 0.5V/div. 1ms/div.
⑦ CH2: XSI 2V/div.
Normal mode: Focus close



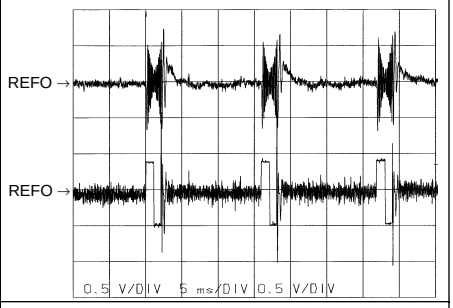
⑧ CH1: TEY 0.5V/div. 0.5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: 32 tracks jump (FWD)



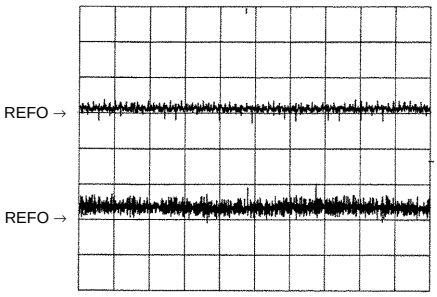
⑧ CH1: TEY 0.5V/div. 0.5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: Single jump (FWD)



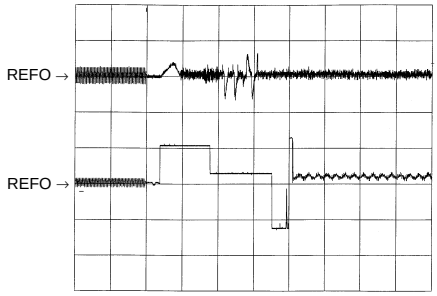
⑧ CH1: TEY 0.5V/div. 5ms/div.
⑨ CH2: TD 0.5V/div.
Test mode: 100 tracks jump (FWD)



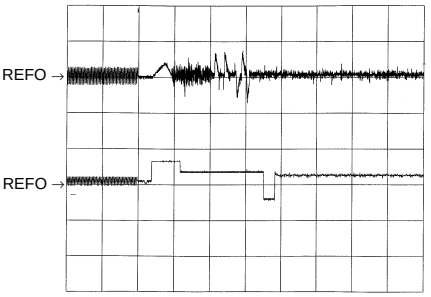
⑥ CH1: FEY 0.1V/div. 20ms/div.
③ CH2: FD 0.2V/div.
Normal mode: Play



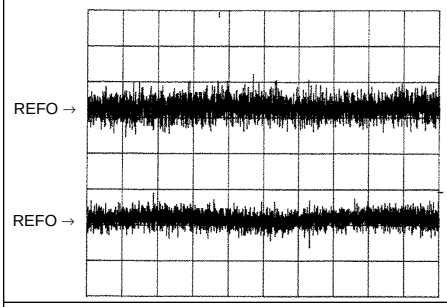
③ CH1: FD 0.5V/div. 0.5s/div.
⑩ CH2: MDYA 1V/div.
Normal mode: Focus close (12cm)



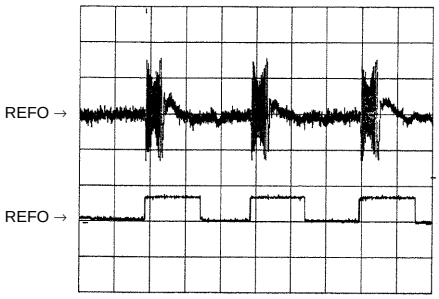
③ CH1: FD 0.5V/div. 0.5s/div.
⑩ CH2: MDYA 1V/div.
Normal mode: Focus close (8cm)



⑧ CH1: TEY 0.2V/div. 20ms/div.
⑨ CH2: TD 0.2V/div.
Normal mode: play

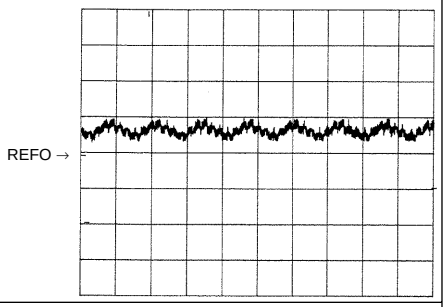


⑧ CH1: TEY 0.5V/div. 5ms/div.
⑪ CH2: SD 0.5V/div.



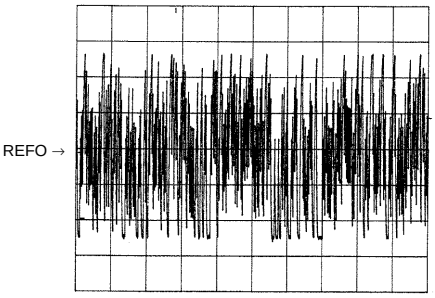
⑩ MDYA 0.5V/div. 0.1s/div.

Normal mode: Play (12cm)



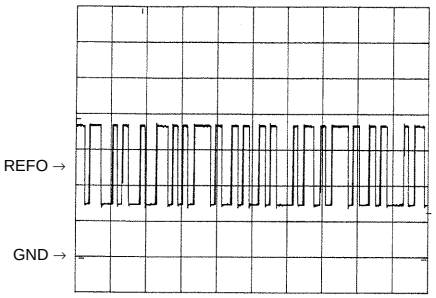
⑩ MDYA 0.5V/div. 10ms/div.

Long Search (12cm)

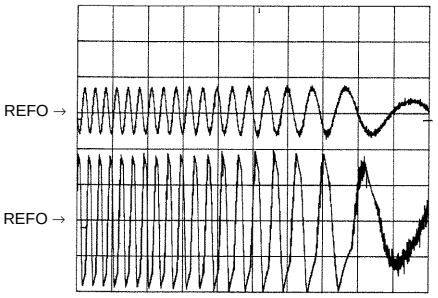


⑫ EFM 1V/div. 5µs/div.

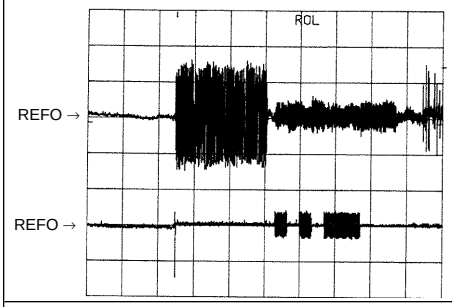
Play



⑧ CH1: TEY 1V/div. 2ms/div.
⑬ CH2: TEC 1V/div.
Test mode: Focus close
Tracking open

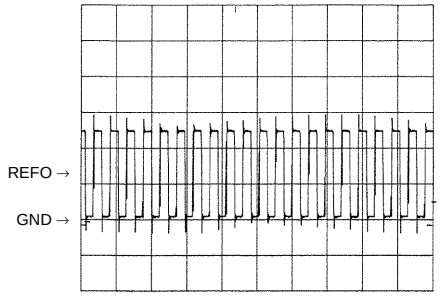


⑧ CH1: TEY 0.5V/div. 0.2s/div.
⑥ CH2: FEY 0.5V/div.
Normal mode: AGC after focus close



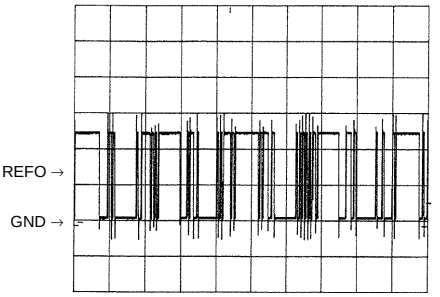
⑭ SCKO 2V/div. 1µs/div.

Play

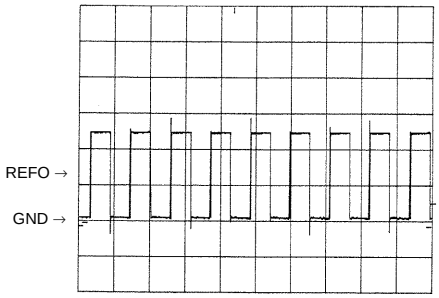


⑮ Dout 2V/div. 10µs/div.

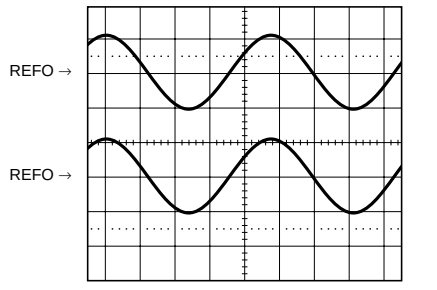
Play



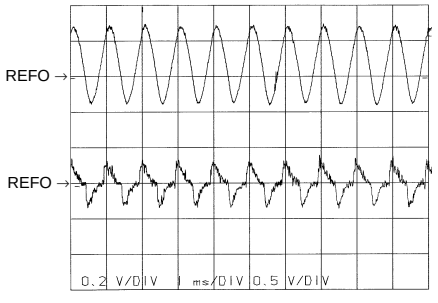
⑯ LRCK 2V/div. 20µs/div.

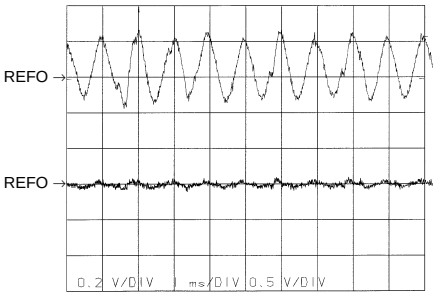
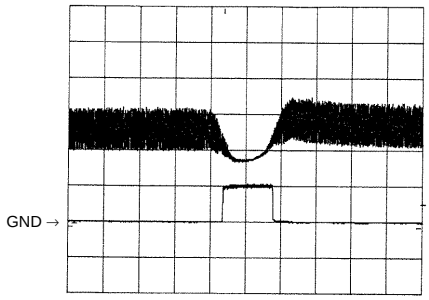
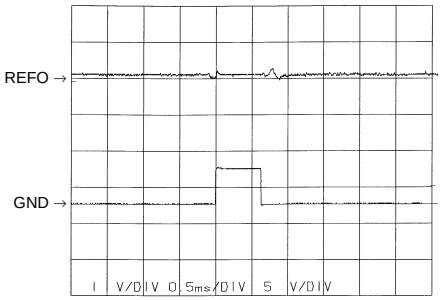


⑱ CH1: R OUT 1V/div. 0.2ms/div.
⑰ CH2: L OUT 1V/div.
Normal mode: Play (1kHz 0dB)



⑥ CH1: FEY 0.2V/div. 1ms/div.
③ CH2: FD 0.5V/div.
Normal mode: During AGC



⑧ CH1: TEY 0.2V/div. ⑨ CH2: TD 0.5V/div. 1ms/div. Normal mode: During AGC 	① CH1: RFO 1V/div. ⑯ CH2: HOLD 5V/div. 0.5ms/div. Normal mode: The defect part passes 800µm 	③ CH1: FD 1V/div. ⑯ CH2: HOLD 5V/div. 0.5ms/div. Normal mode: The defect part passes 800µm 

A

B

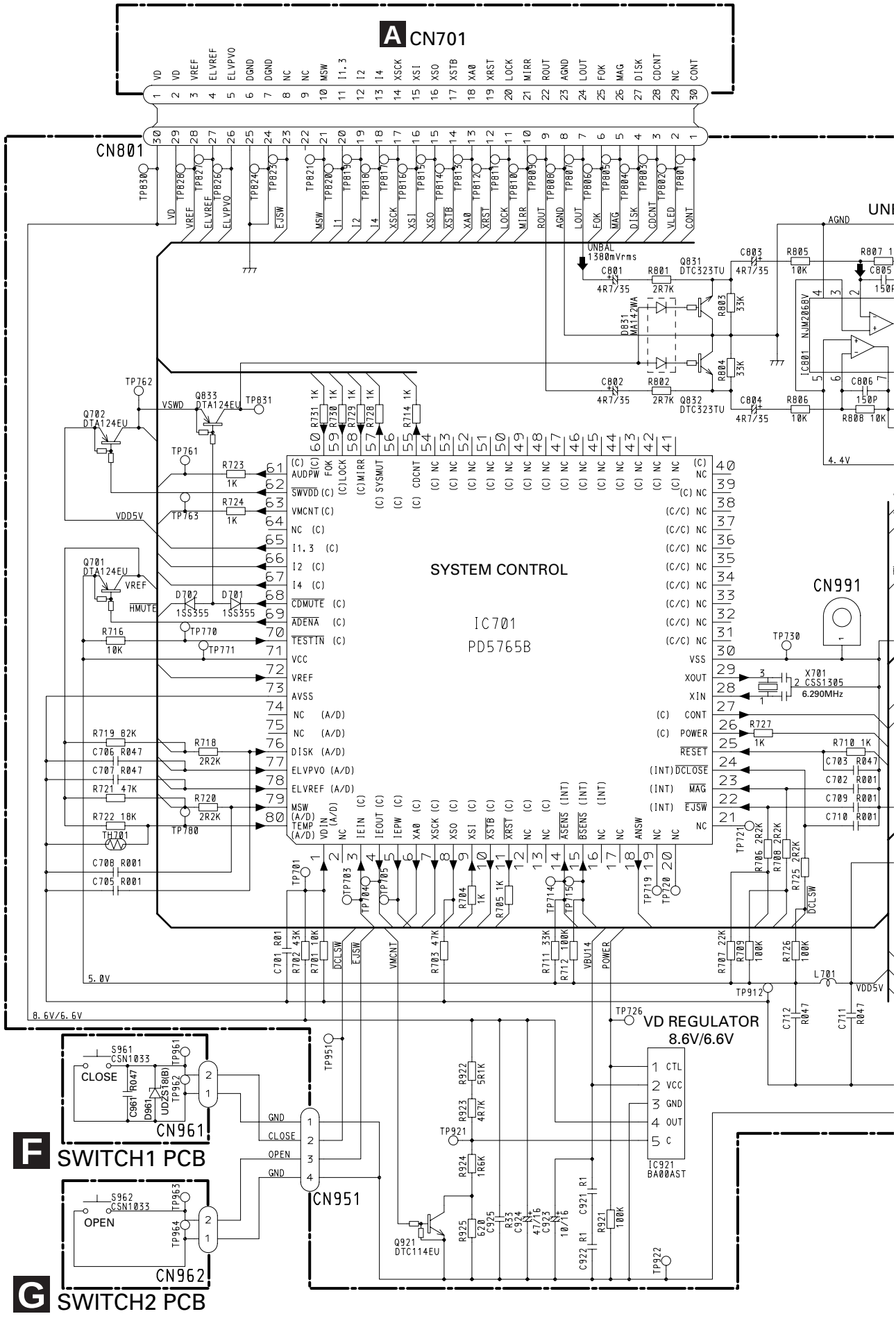
C

D

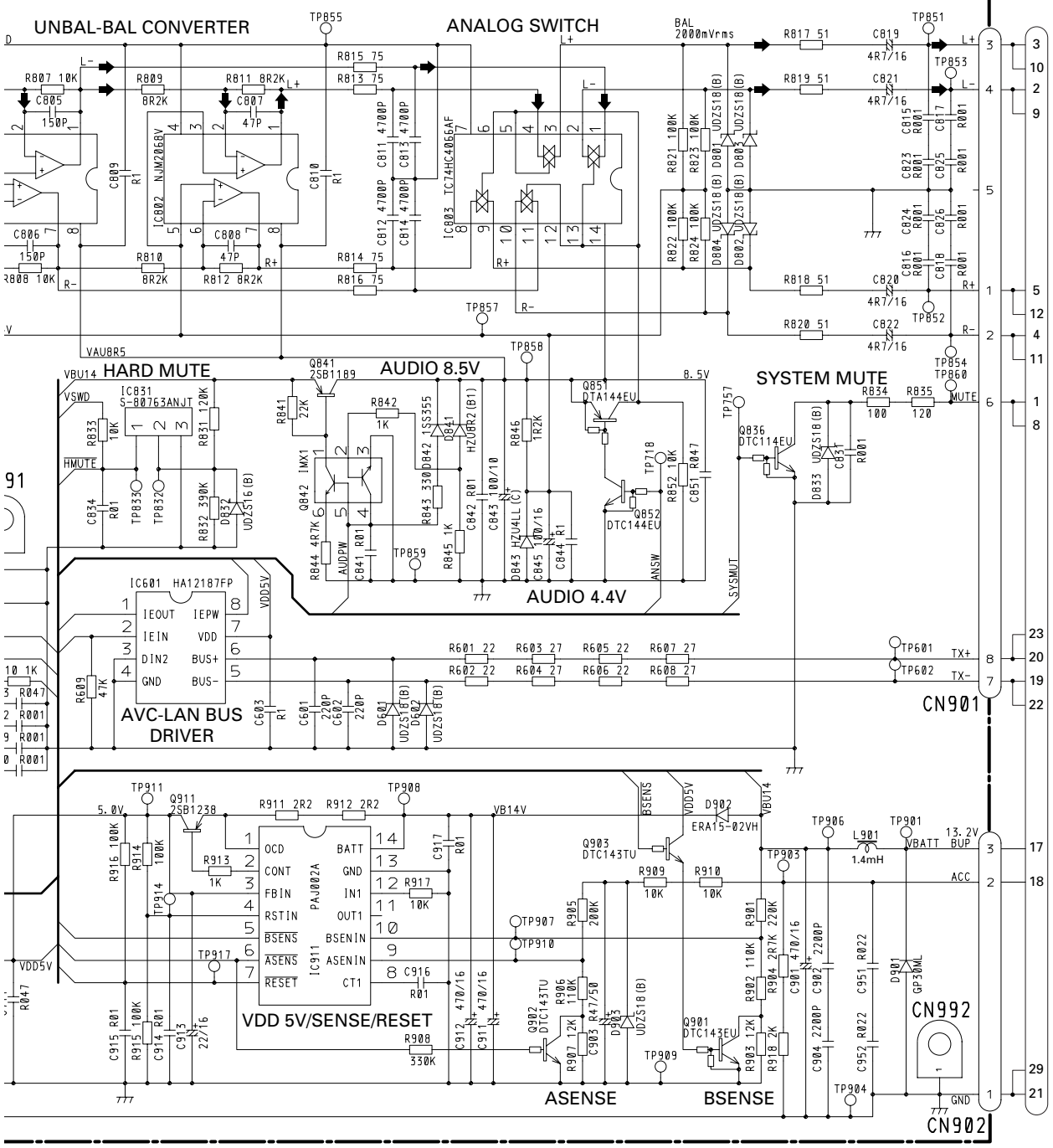
E

F

3.3 EXTENSION UNIT AND SWITCH UNIT



E EXTENSION UNIT



17	NTSI		SG 32
16	VR2+		SGD2 31
14	VL2+		ADPG2 30
13	SGD1		SGND 29
12	AR+		SG 28
11	AR-		NTSC 27
10	AL+		VR+ 26
9	AL-		VL+ 25
8	MUTE		GND 24
7	ADPG		TX2+ 23
6	SGND		TX2- 22
5	CDR+		GND 21
4	CDR-		TXM+ 20
3	CDL+		TXM- 19
2	CDL-		ACC 18
1	MUTE		+B 17

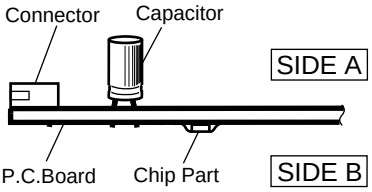
SWITCH UNIT
Consists of
SWITCH1 PCB
SWITCH2 PCB

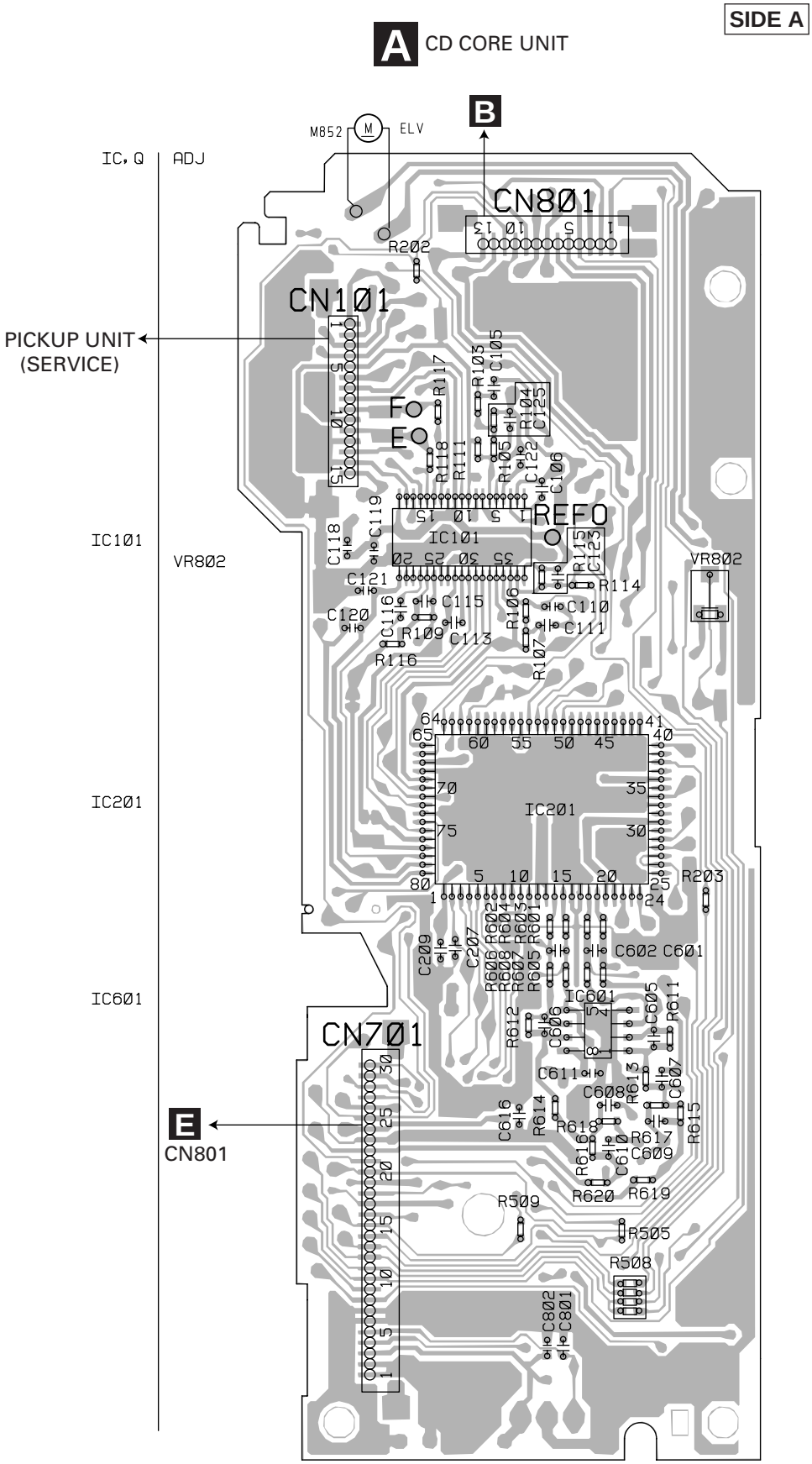
4. PCB CONNECTION DIAGRAM

4.1 CD CORE UNIT

NOTE FOR PCB DIAGRAMS

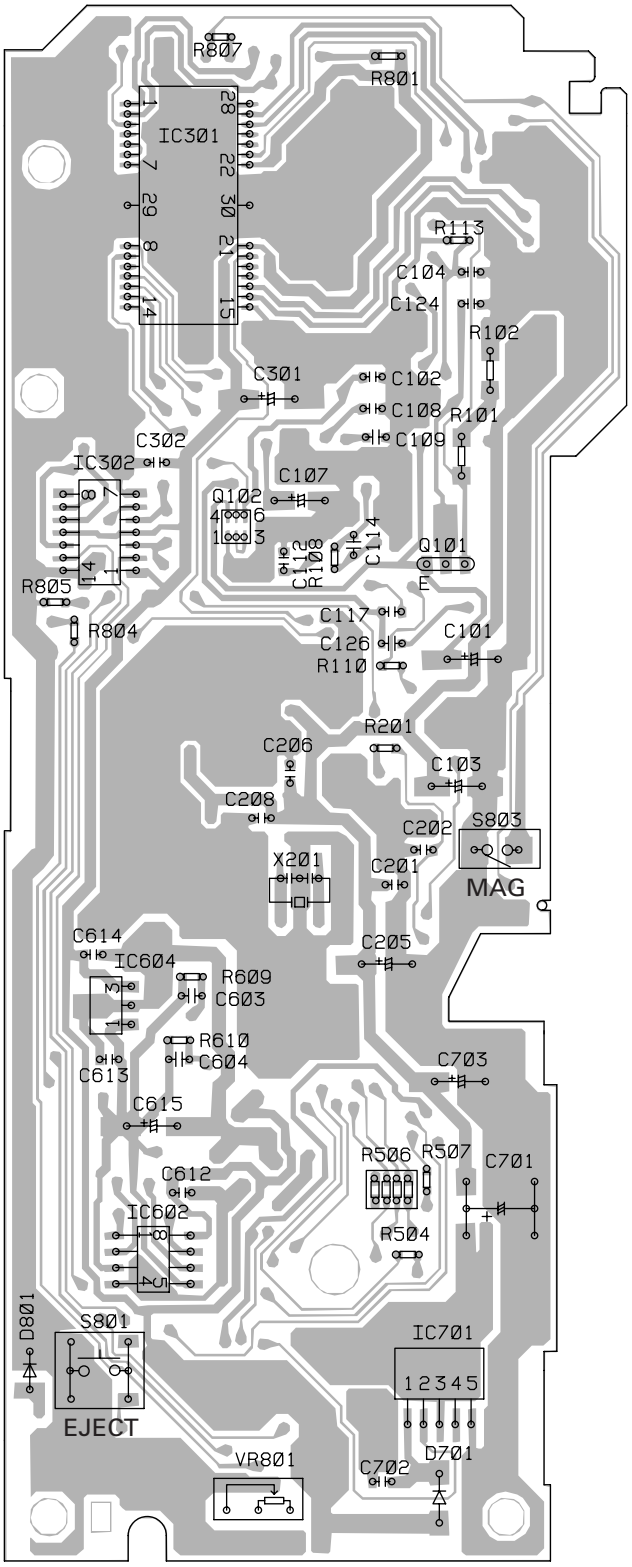
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams





A CD CORE UNIT

SIDE B



IC, Q

IC301

IC302

Q102

Q101

IC604

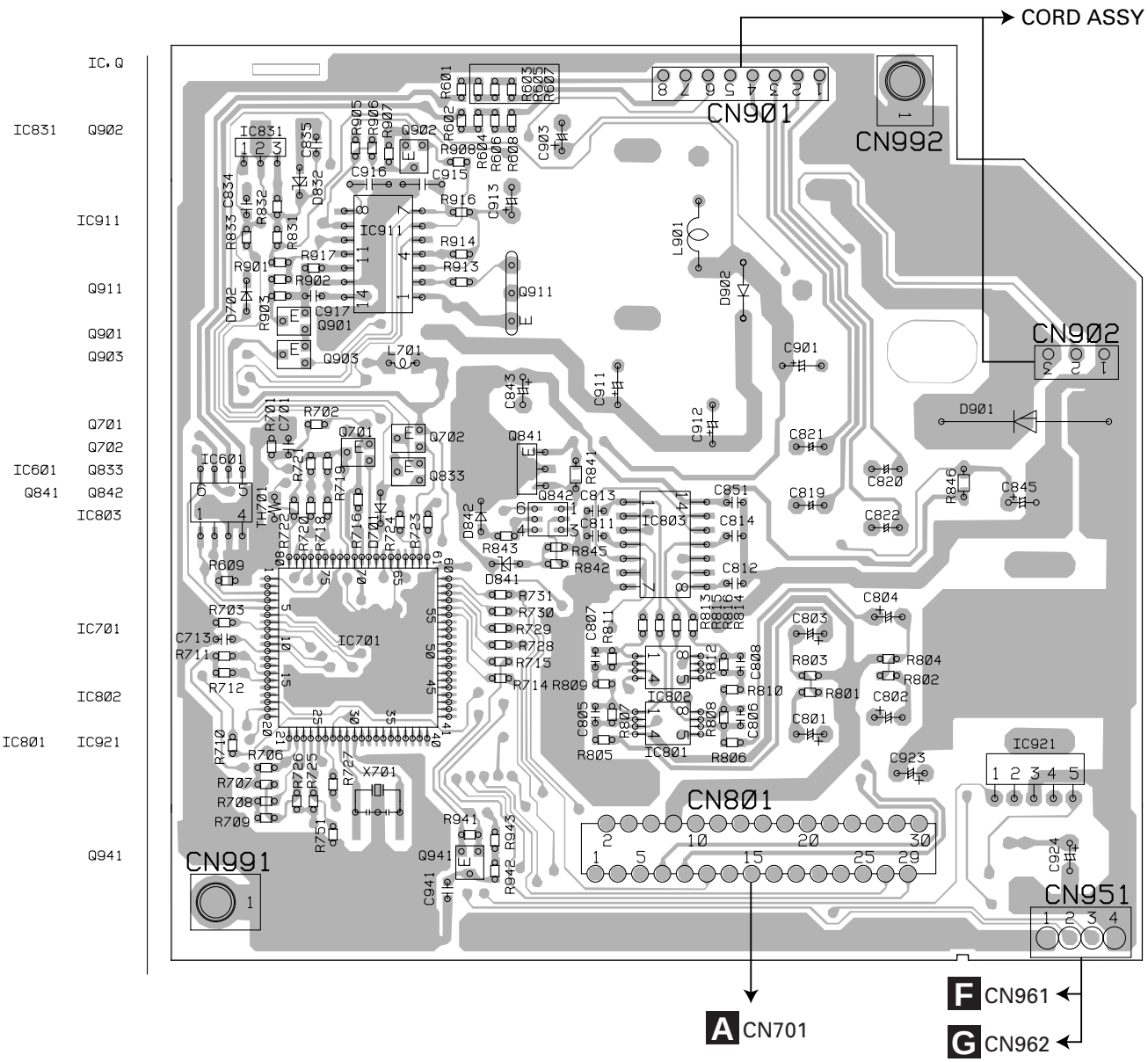
IC602

IC701

4.2 EXTENSION UNIT

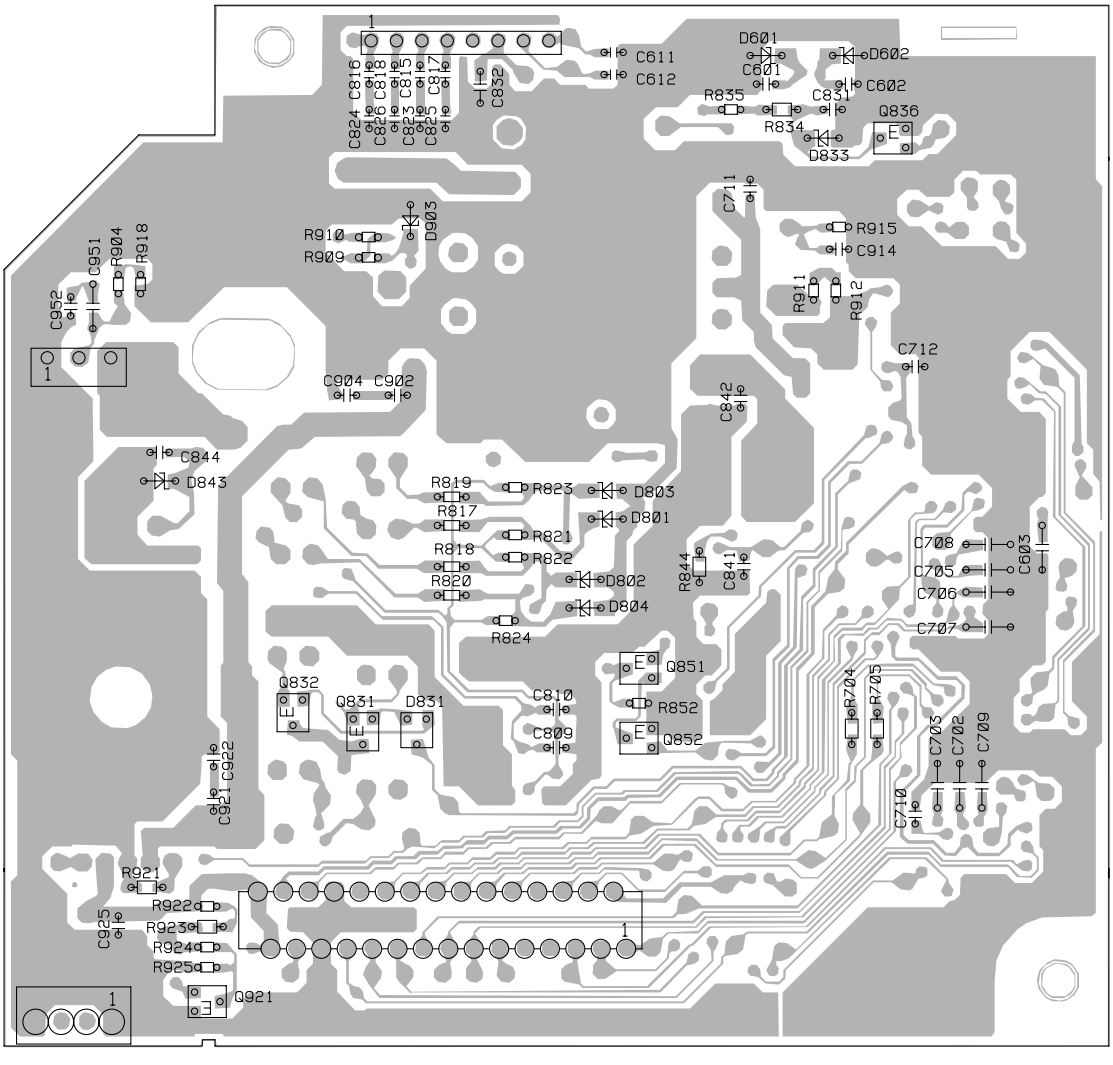
E EXTENSION UNIT

SIDE A



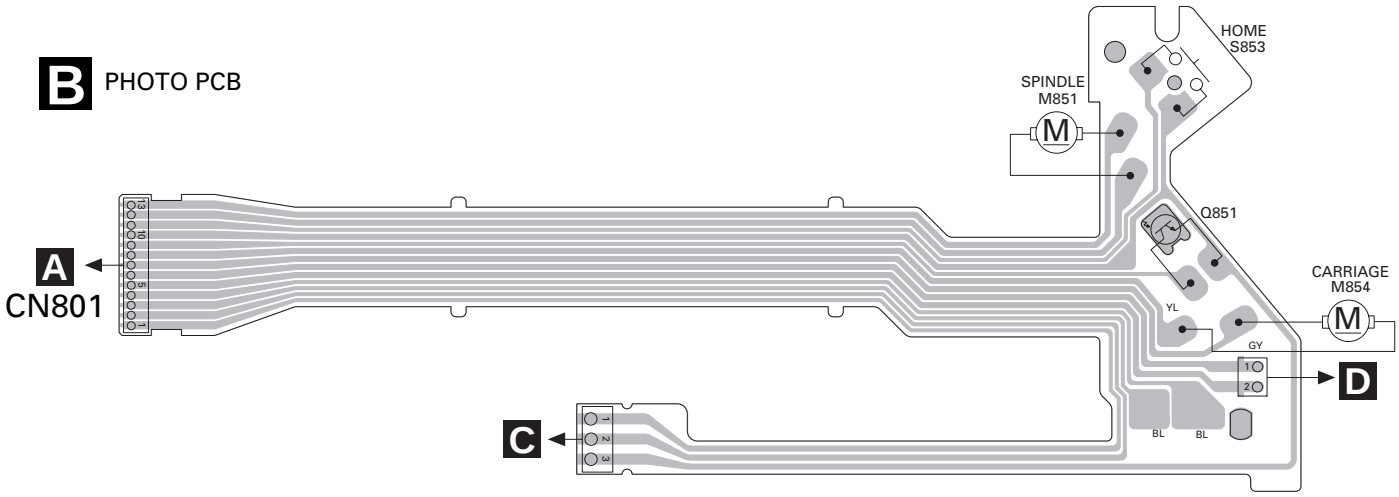
E EXTENSION UNIT

SIDE B



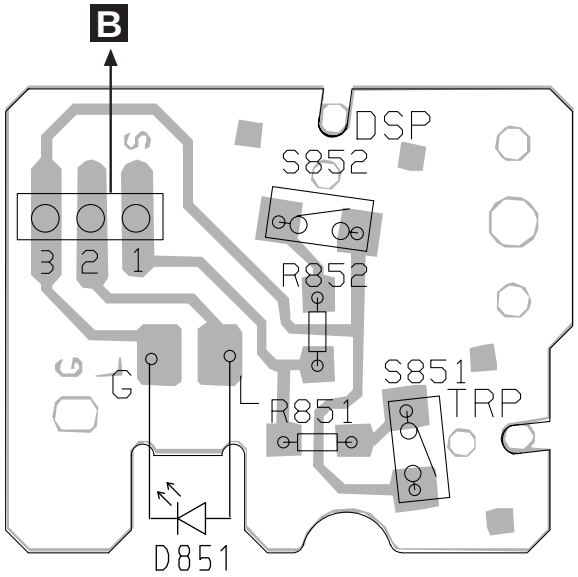
4.3 PHOTO PCB

B PHOTO PCB



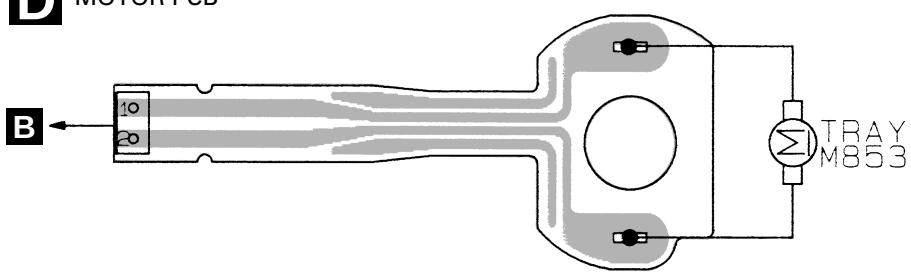
4.4 PCB UNIT

C PCB UNIT



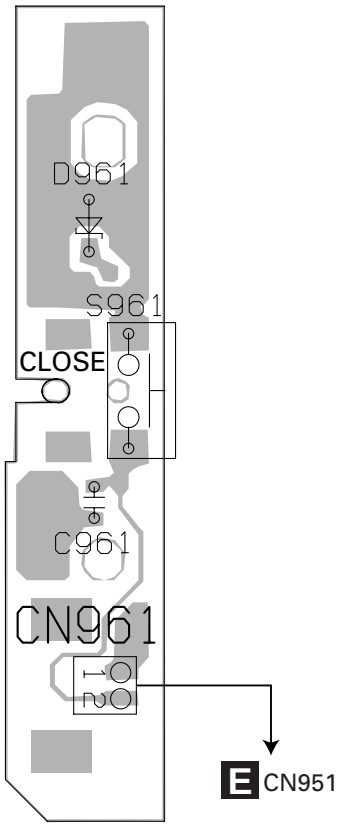
4.5 MOTOR PCB

D MOTOR PCB

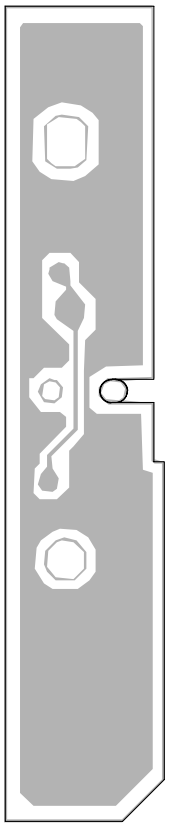


4.6 SWITCH1 PCB

F SWITCH1 PCB SIDE A

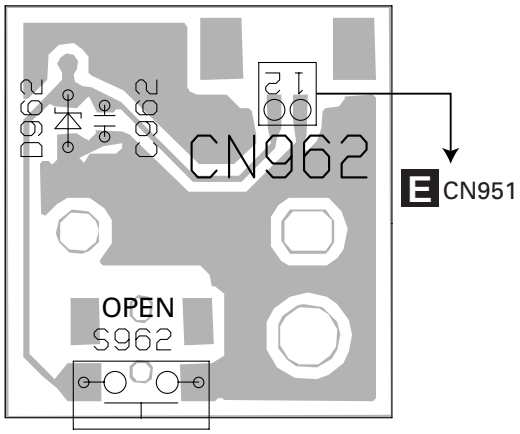


F SWITCH1 PCB SIDE B

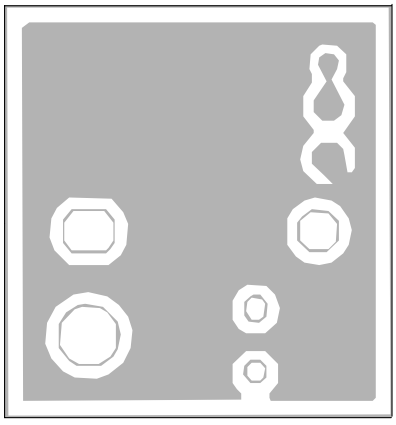


4.7 SWITCH2 PCB

G SWITCH2 PCB SIDE A



G SWITCH2 PCB SIDE B



5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

A Unit Number : CWX2578
Unit Name : CD Core Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	UPC2572GS
IC	201	IC	UPD63702AGF
IC	301	IC	BA6997FM
IC	302	IC	LB1836M
IC	601	IC	NJM2068MD
IC	602	IC	NJM2068MD
IC	604	IC	TA78L05F
IC	701	IC	PQ05DZ51
Q	101	Transistor	2SD1664
Q	102	Transistor	UMD2N
D	701	Diode	1SR154-400
D	801	LED	CL200FGCTU
X	201	Ceramic Resonator 16.934MHz	CSS1456
S	801	Push Switch(EJECT)	CSG1139
S	803	Switch(MAG)	CSN1028
VR	802	Semi-fixed 1kΩ(B)	CCP1338

RESISTORS

R	101		RS1/8S100J
R	102		RS1/8S120J
R	103		RS1/16S102J
R	104		RS1/16S822J
R	105		RS1/16S682J
R	106		RS1/16S183J
R	107		RS1/16S822J
R	108		RS1/16S333J
R	109		RS1/16S683J
R	110		RS1/16S134J
R	111		RS1/16S273J
R	113		RS1/16S222J
R	114		RS1/16S103J
R	115		RS1/16S103J
R	116		RS1/16S102J
R	117		RS1/16S163J
R	118		RS1/16S163J
R	201		RS1/16S104J
R	202		RS1/16S104J
R	203		RS1/16S102J
R	504		RS1/16S102J
R	505		RS1/16S221J
R	506		RAB4C221J
R	507		RS1/16S102J
R	508		RAB4C332J
R	509		RS1/16S221J
R	601		RS1/16S103J
R	602		RS1/16S103J
R	603		RS1/16S103J
R	604		RS1/16S103J
R	605		RS1/16S912J
R	606		RS1/16S912J
R	607		RS1/16S912J
R	608		RS1/16S912J
R	609		RS1/16S153J
R	610		RS1/16S153J
R	611		RN1/16SE1502D
R	612		RN1/16SE1502D
R	613		RN1/16SK5601D
R	614		RN1/16SK5601D
R	615		RN1/16SK5601D
R	616		RN1/16SK5601D
R	617		RN1/16SK5601D
R	618		RN1/16SK5601D
R	619		RS1/16S101J
R	620		RS1/16S101J
R	801		RS1/10S681J
R	804		RS1/16S622J
R	805		RS1/16S562J
R	807		RS1/16S0R0J

CAPACITORS

C	101		CEV101M6R3
C	102		CKSRYB104K16
C	103		CEV470M6R3
C	104		CKSRYB224K16
C	105		CCSRCH330J50
C	106		CKSRYB103K25
C	107		CEV4R7M35
C	108		CKSRYB273K25
C	109		CCSRCH101J50
C	110		CKSRYB104K16
C	111		CKSRYB332K50
C	112		CKSRYB473K25
C	113		CKSRYB103K25
C	114		CKSRYB391K50
C	115		CCSRCH121J50
C	116		CKSRYB682K25
C	117		CKSRYB333K25
C	118		CKSRYB224K16
C	119		CKSRYB224K16
C	120		CKSRYB224K16
C	121		CKSRYB224K16
C	122		CKSRYB104K16
C	123		CKSRYB472K50
C	124		CKSRYB104K16
C	125		CCSRCH6R0D50
C	126		CKSRYB153K25
C	201		CKSRYB224K16
C	202		CKSRYB104K16
C	205		CEV101M6R3
C	206		CKSRYB224K16

=====Circuit Symbol and No.	===Part Name	Part No.
C 207		CKSRYB102K50
C 208		CKSRYB224K16
C 209		CKSRYB104K16
C 301		CEV101M10
C 302		CKSRYB224K16
C 601		CCSRCH181J50
C 602		CCSRCH181J50
C 603		CCSRCH820J50
C 604		CCSRCH820J50
C 605		CCSRCH820J50
C 606		CCSRCH820J50
C 607		CCSRCH821J50
C 608		CCSRCH821J50
C 609		CCSRCH181J50
C 610		CCSRCH181J50
C 611		CKSRYB104K16
C 612		CKSRYB104K16
C 613		CKSRYB104K16
C 614		CKSRYB104K16
C 615		CEV101M10
C 616		CKSRYB103K25
C 701	22µF/6.3V	CCH1233
C 702		CKSRYB224K16
C 703		CEV101M6R3
C 801		CKSRYB103K25
C 802		CKSRYB104K16

E Unit Number : CWX2654
Unit Name : Extension Unit

MISCELLANEOUS

IC 601	IC		HA12187FP
IC 701	IC		PD5765B
IC 801	IC		NJM2068V
IC 802	IC		NJM2068V
IC 803	IC		TC74HC4066AF
IC 831	IC		S-80763ANJT
IC 911	IC		PAJ002A
IC 921	IC		BA00AST
Q 701	Transistor		DTA124EU
Q 702	Transistor		DTA124EU
Q 831	Transistor		DTC323TU
Q 832	Transistor		DTC323TU
Q 833	Transistor		DTA124EU
Q 836	Transistor		DTC114EU
Q 841	Transistor		2SB1189
Q 842	Transistor		IMX1
Q 851	Transistor		DTA144EU
Q 852	Transistor		DTC144EU
Q 901	Transistor		DTC143EU
Q 902	Transistor		DTC143TU
Q 903	Transistor		DTC143TU
Q 911	Transistor		2SB1238
Q 921	Transistor		DTC114EU
D 601	Diode		UDZS18(B)
D 602	Diode		UDZS18(B)
D 701	Diode		1SS355
D 702	Diode		1SS355
D 801	Diode		UDZS18(B)
D 802	Diode		UDZS18(B)
D 803	Diode		UDZS18(B)
D 804	Diode		UDZS18(B)
D 831	Diode		MA142WA
D 832	Diode		UDZS16(B)
D 833	Diode		UDZS18(B)
D 841	Diode		HZU8R2(B1)

=====Circuit Symbol and No.	===Part Name	Part No.
D 842	Diode	1SS355
D 843	Diode	HZU4LL(C)
D 901	Diode	GP30ML
D 902	Diode	ERA15-02VH
D 903	Diode	UDZS18(B)
L 701	Inductor	LCTA4R7J2520
L 901	Choke Coil 1.4mH	CTH1129
TH 701	Thermistor	CCX1032
X 701	Ceramic Resonator 6.290MHz	CSS1305

RESISTORS

R 601		RS1/16S220J
R 602		RS1/16S220J
R 603		RS1/16S270J
R 604		RS1/16S270J
R 605		RS1/16S220J
R 606		RS1/16S220J
R 607		RS1/16S270J
R 608		RS1/16S270J
R 609		RS1/16S473J
R 701		RS1/16S103J
R 702		RS1/16S433J
R 703		RS1/16S473J
R 704		RS1/16S102J
R 705		RS1/16S102J
R 706		RS1/16S222J
R 707		RS1/16S223J
R 708		RS1/16S222J
R 709		RS1/16S104J
R 710		RS1/16S102J
R 711		RS1/16S333J
R 712		RS1/16S104J
R 714		RS1/16S102J
R 716		RS1/16S103J
R 718		RS1/16S222J
R 719		RS1/16S823J
R 720		RS1/16S222J
R 721		RS1/16S473J
R 722		RS1/16S183J
R 723		RS1/16S102J
R 724		RS1/16S102J
R 725		RS1/16S222J
R 726		RS1/16S104J
R 727		RS1/16S102J
R 728		RS1/16S102J
R 729		RS1/16S102J
R 730		RS1/16S102J
R 731		RS1/16S102J
R 801		RS1/16S272J
R 802		RS1/16S272J
R 803		RS1/16S333J
R 804		RS1/16S333J
R 805		RS1/16S103J
R 806		RS1/16S103J
R 807		RS1/16S103J
R 808		RS1/16S103J
R 809		RS1/16S822J
R 810		RS1/16S822J
R 811		RS1/16S822J
R 812		RS1/16S822J
R 813		RS1/16S750J
R 814		RS1/16S750J
R 815		RS1/16S750J
R 816		RS1/16S750J
R 817		RS1/10S510J
R 818		RS1/10S510J

=====Circuit Symbol and No.	===Part Name	Part No.
R 819		RS1/10S510J
R 820		RS1/10S510J
R 821		RS1/16S104J
R 822		RS1/16S104J
R 823		RS1/16S104J
R 824		RS1/16S104J
R 831		RS1/16S1203D
R 832		RS1/16S3903D
R 833		RS1/16S103J
R 834		RS1/16S101J
R 835		RS1/16S121J
R 841		RS1/16S223J
R 842		RS1/16S102J
R 843		RS1/16S331J
R 844		RS1/16S472J
R 845		RS1/16S102J
R 846		RS1/16S122J
R 852		RS1/16S103J
R 901		RS1/16S2203D
R 902		RS1/16S1103D
R 903		RS1/16S123J
R 904		RS1/16S272J
R 905		RS1/16S2003D
R 906		RS1/16S1103D
R 907		RS1/16S123J
R 908		RS1/16S334J
R 909		RS1/16S1002D
R 910		RS1/16S1002D
R 911		RS1/16S2R2J
R 912		RS1/16S2R2J
R 913		RS1/16S102J
R 914		RS1/16S104J
R 915		RS1/16S104J
R 916		RS1/16S104J
R 917		RS1/16S103J
R 918		RS1/16S202J
R 921		RS1/16S104J
R 922		RS1/16S5101D
R 923		RS1/16S4701D
R 924		RS1/16S1601D
R 925		RS1/16S6200D

CAPACITORS

C	601		CKSRYB221K50
C	602		CKSRYB221K50
C	603		CKSRYB104K25
C	701		CKSRYB103K50
C	702		CKSRYB102K50
C	703		CKSRYB473K50
C	705		CKSRYB102K50
C	706		CKSRYB473K50
C	707		CKSRYB473K50
C	708		CKSRYB102K50
C	709		CKSRYB102K50
C	710		CKSRYB102K50
C	711		CKSRYB473K50
C	712		CKSRYB473K50
C	801		CEJQ4R7M35
C	802		CEJQ4R7M35
C	803		CEJQ4R7M35
C	804		CEJQ4R7M35
C	805		CCSRCH151J50
C	806		CCSRCH151J50
C	807		CCSRCH470J50
C	808		CCSRCH470J50
C	809		CKSRYB104K25
C	810		CKSRYB104K25
C	811		CKSRYB472K50

=====Circuit Symbol and No.	===Part Name	Part No.
C 812		CKSRYB472K50
C 813		CKSRYB472K50
C 814		CKSRYB472K50
C 815		CKSRYB102K50
C 816		CKSRYB102K50
C 817		CKSRYB102K50
C 818		CKSRYB102K50
C 819		CEJQNP4R7M16
C 820		CEJQNP4R7M16
C 821		CEJQNP4R7M16
C 822		CEJQNP4R7M16
C 823		CKSRYB102K50
C 824		CKSRYB102K50
C 825		CKSRYB102K50
C 826		CKSRYB102K50
C 831		CKSRYB102K50
C 834		CKSRYB103K50
C 841		CKSRYB103K50
C 842		CKSRYB103K50
C 843	100µF/10V	CCH1402
C 844		CKSRYB104K25
C 845		CEJQ101M16
C 851		CKSRYB473K50
C 901	470µF/16V	CCH1414
C 902		CKSRYB222K50
C 903		CEJQR47M50
C 904		CKSRYB222K50
C 911	470µF/16V	CCH1414
C 912	470µF/16V	CCH1414
C 913		CSZA220M16
C 914		CKSRYB103K50
C 915		CKSRYB103K50
C 916		CKSRYB103K50
C 917		CKSRYB103K50
C 921		CKSRYB104K25
C 922		CKSRYB104K25
C 923		CEJQ100M16
C 924	47µF/16V	CCH1378
C 925		CKSRYB334K10
C 951		CKSRYB223K50
C 952		CKSRYB223K50

B Unit Number :
Unit Name : Photo PCB

Q	851	Photo-transistor	PT4800
S	853	Switch(HOME)	CSN1012

C Unit Number :
Unit Name : PCB Unit

S	851	Spring Switch(TRP)	CSN1052
S	852	Spring Switch(DSP)	CSN1051
R	851		RS1/8S473J
R	852		RS1/8S753J

D Unit Number :
Unit Name : Motor PCB

M	853	Motor Unit(TRAY)	CXB5747

=====Circuit Symbol and No.	===Part Name	Part No.

Switch Unit
Consists of
Switch1 PCB
Switch2 PCB

FG Unit Number : CWM8564
Unit Name : Switch Unit

MISCELLANEOUS

D	961	Diode	UDZS18(B)
S	961	Spring Switch(CLOSE)	CSN1033
S	962	Spring Switch(OPEN)	CSN1033

CAPACITORS

C	961		CKSRYB473K50

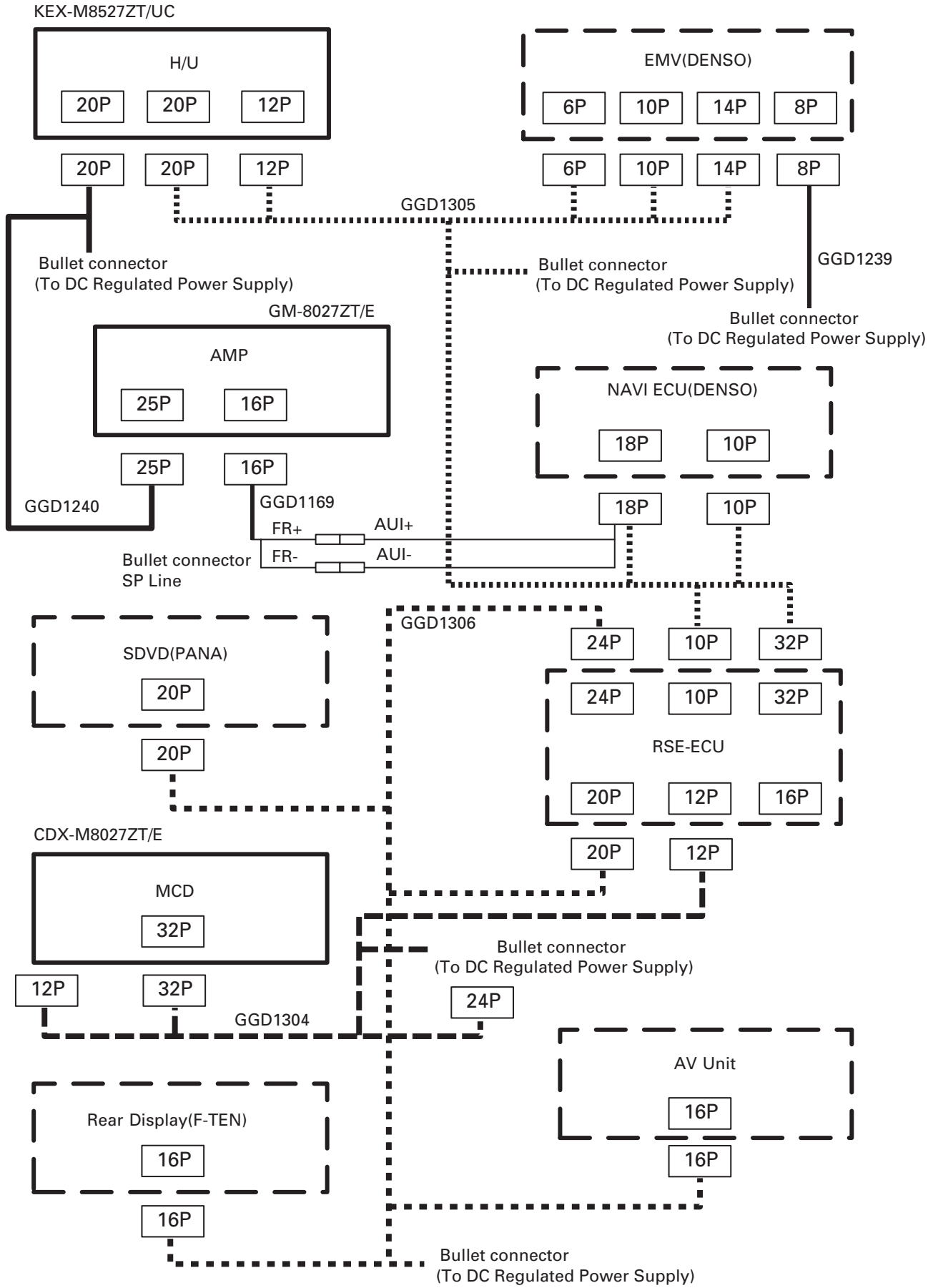
Miscellaneous Parts List

D	851	LED	CN504-2
M	851	Motor Unit(SPINDLE)	CXB2187
M	852	Motor Unit(ELV)	CXB3931
M	854	Motor Unit(CARRIAGE)	CXB1394
VR	801	Volume 10kΩ	CCW1021
		Pickup Unit(Service)	CXX1235

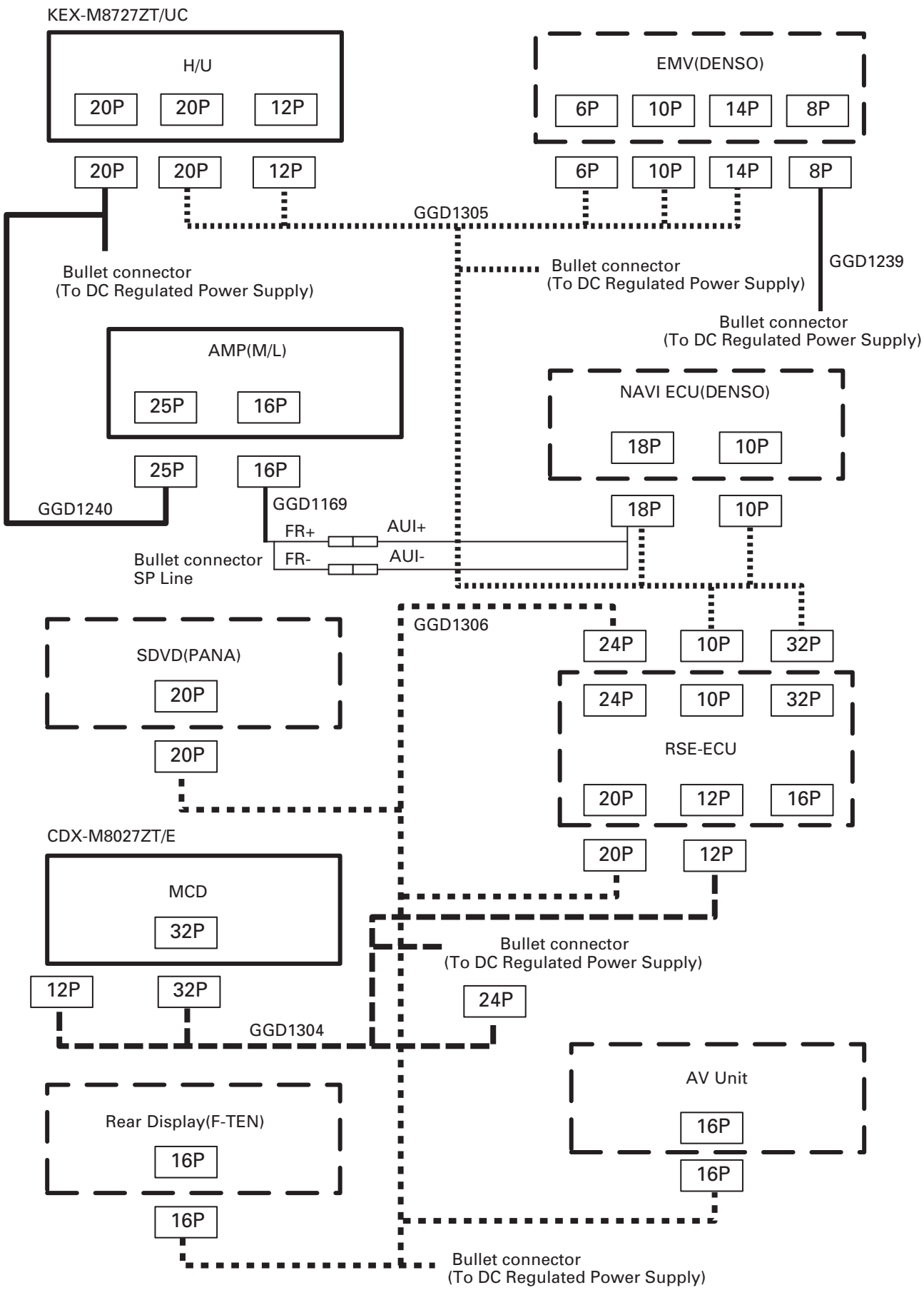
6. ADJUSTMENT

● Connection Diagram

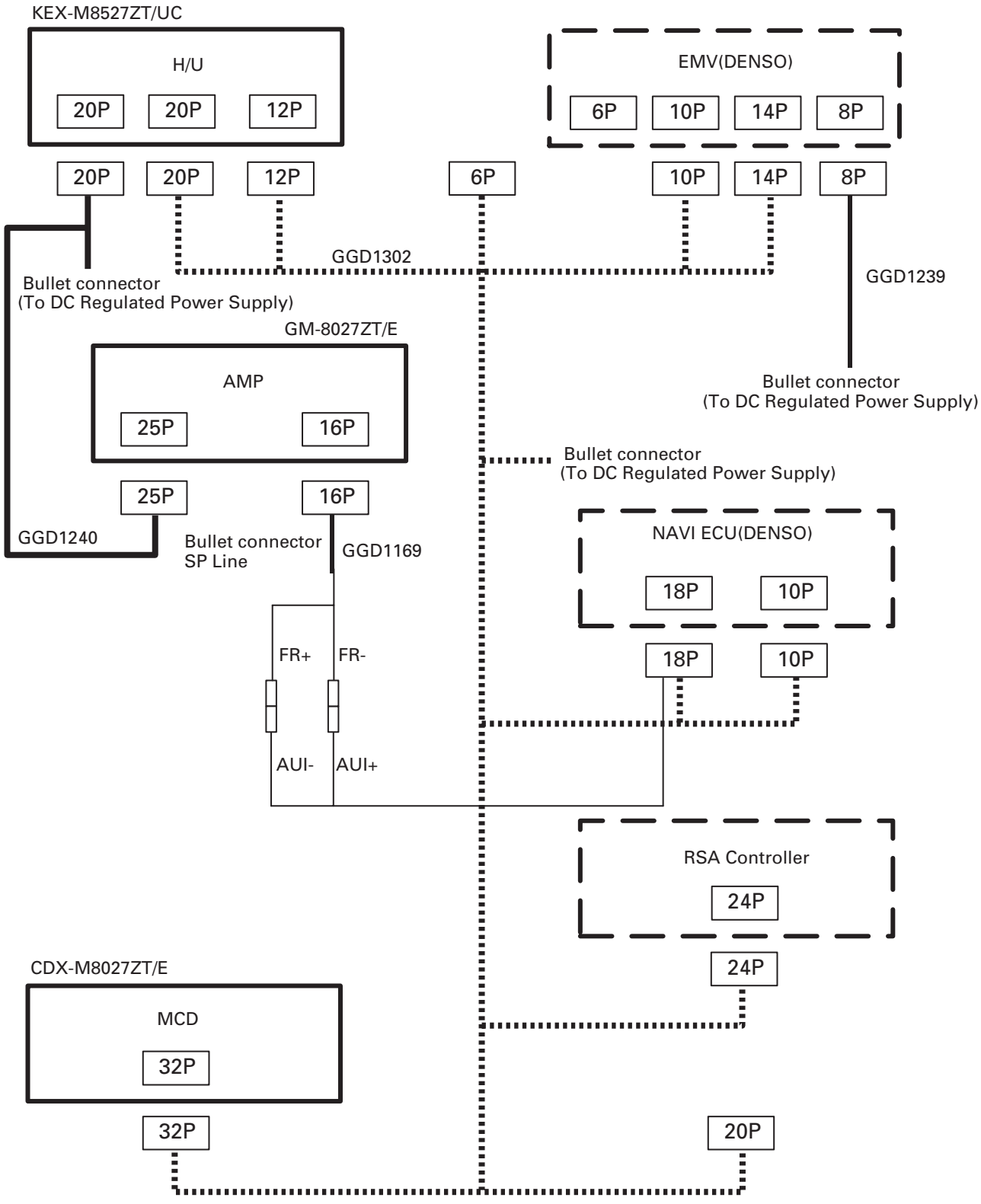
• NORTH AMERICA LEXUS EMV SYSTEM(RSE)



• NORTH AMERICA LEXUS EMV SYSTEM M/L(RSE)

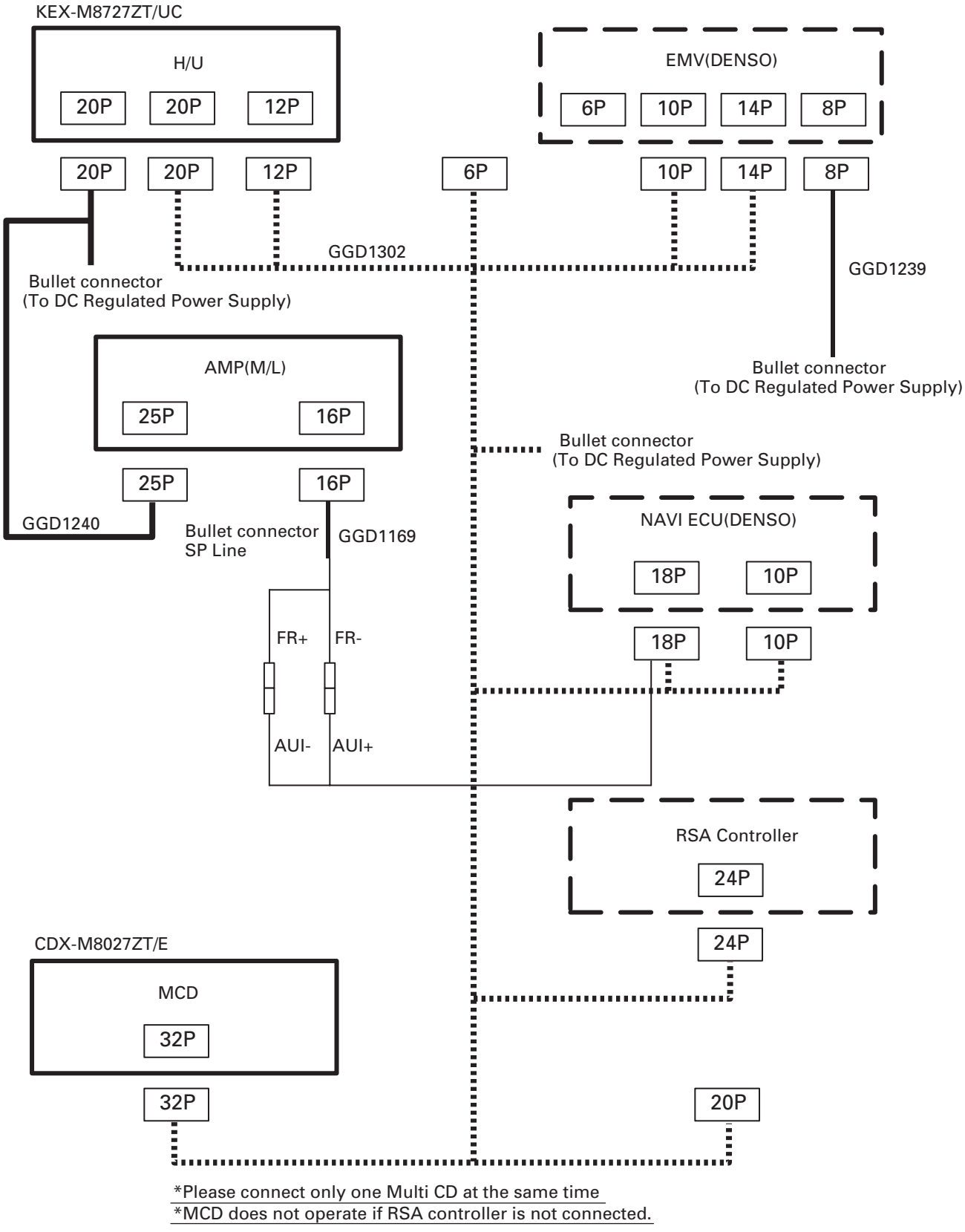


• NORTH AMERICA LEXUS EMV SYSTEM(RSA)

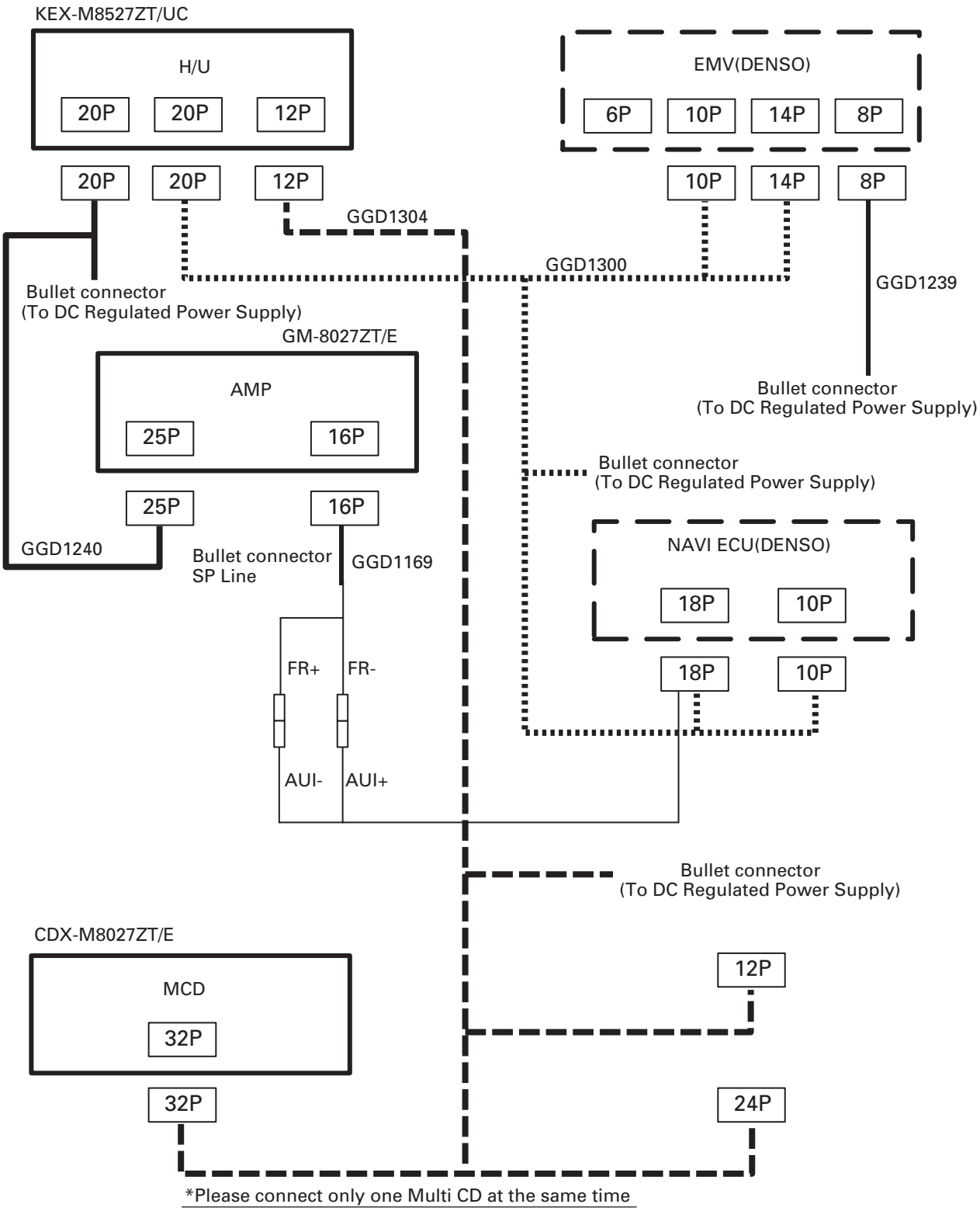


*Please connect only one Multi CD at the same time
*MCD does not operate if RSA controller is not connected.

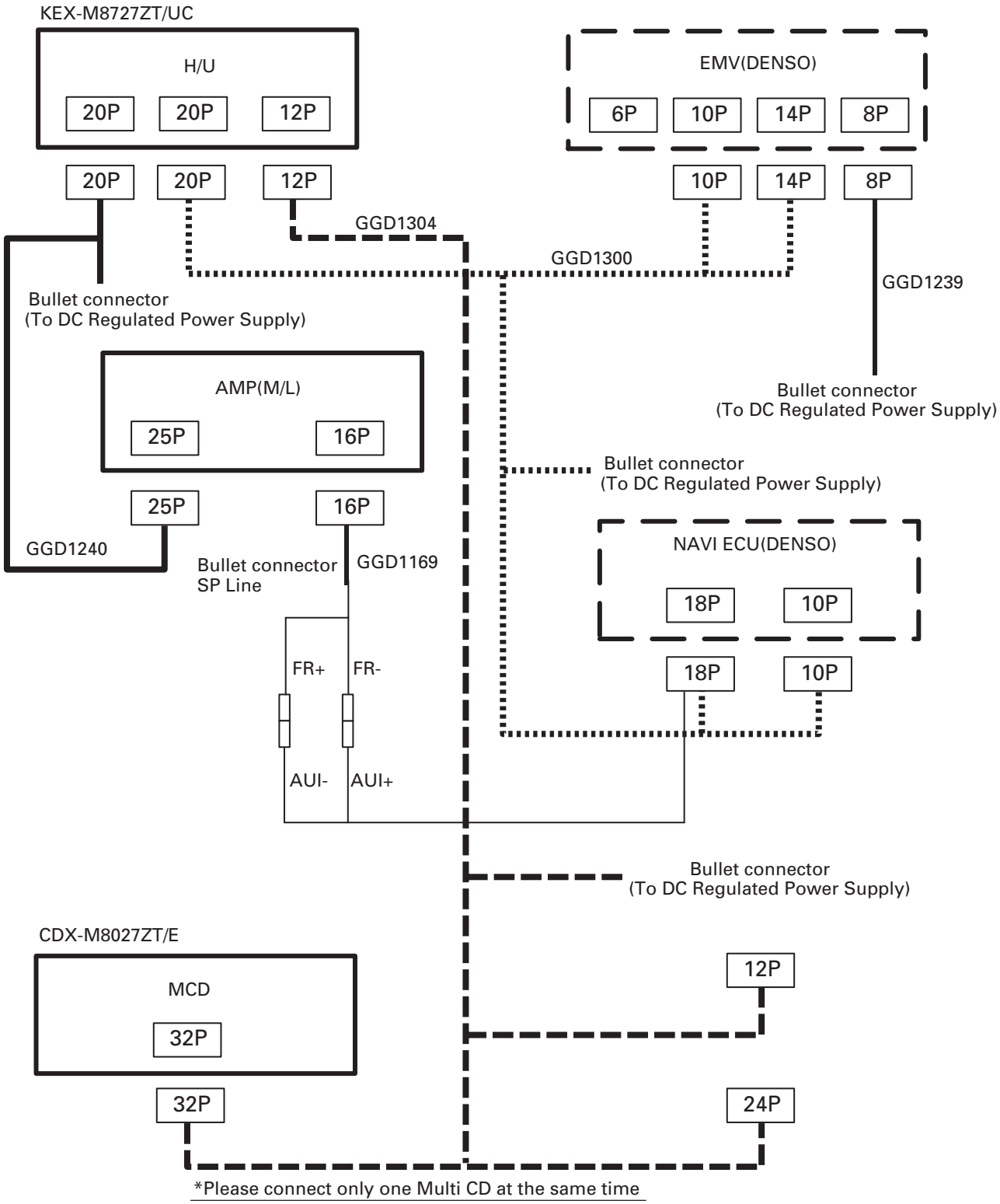
• NORTH AMERICA LEXUS EMV SYSTEM M/L(RSA)



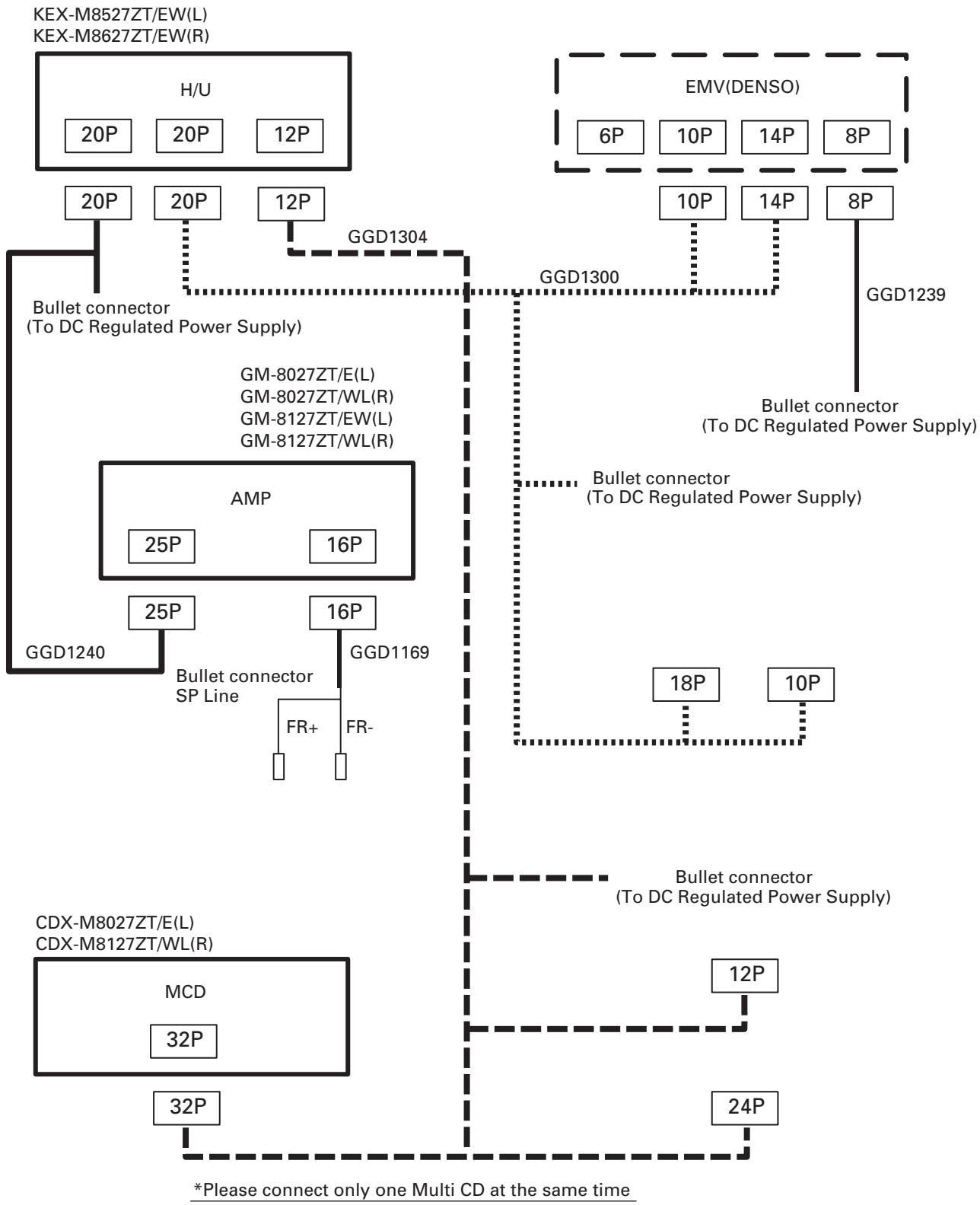
• NORTH AMERICA LEXUS EMV SYSTEM



• NORTH AMERICA LEXUS EMV SYSTEM M/L

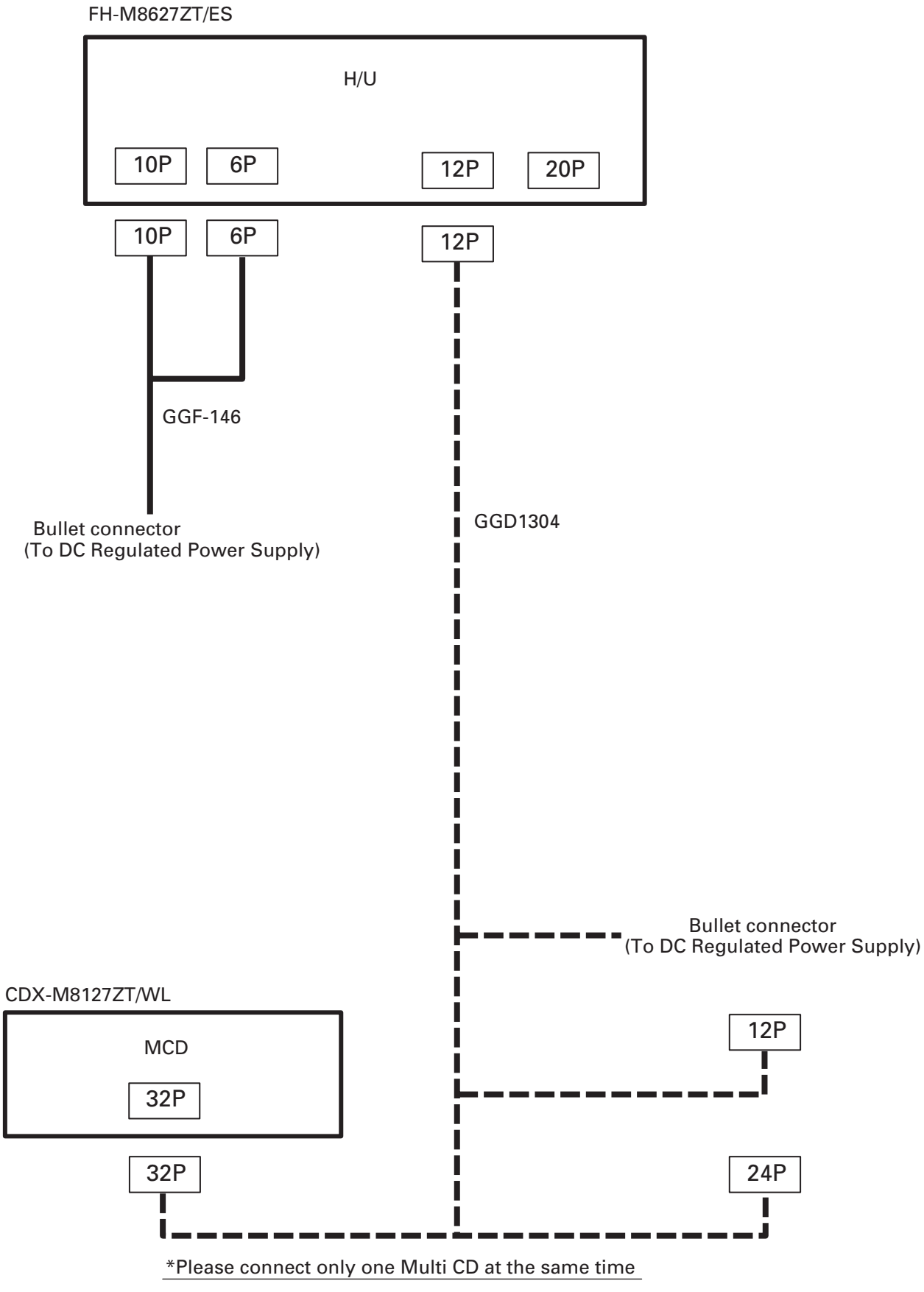


• EUROPE TOYOTA(L/R) EMV SYSTEM

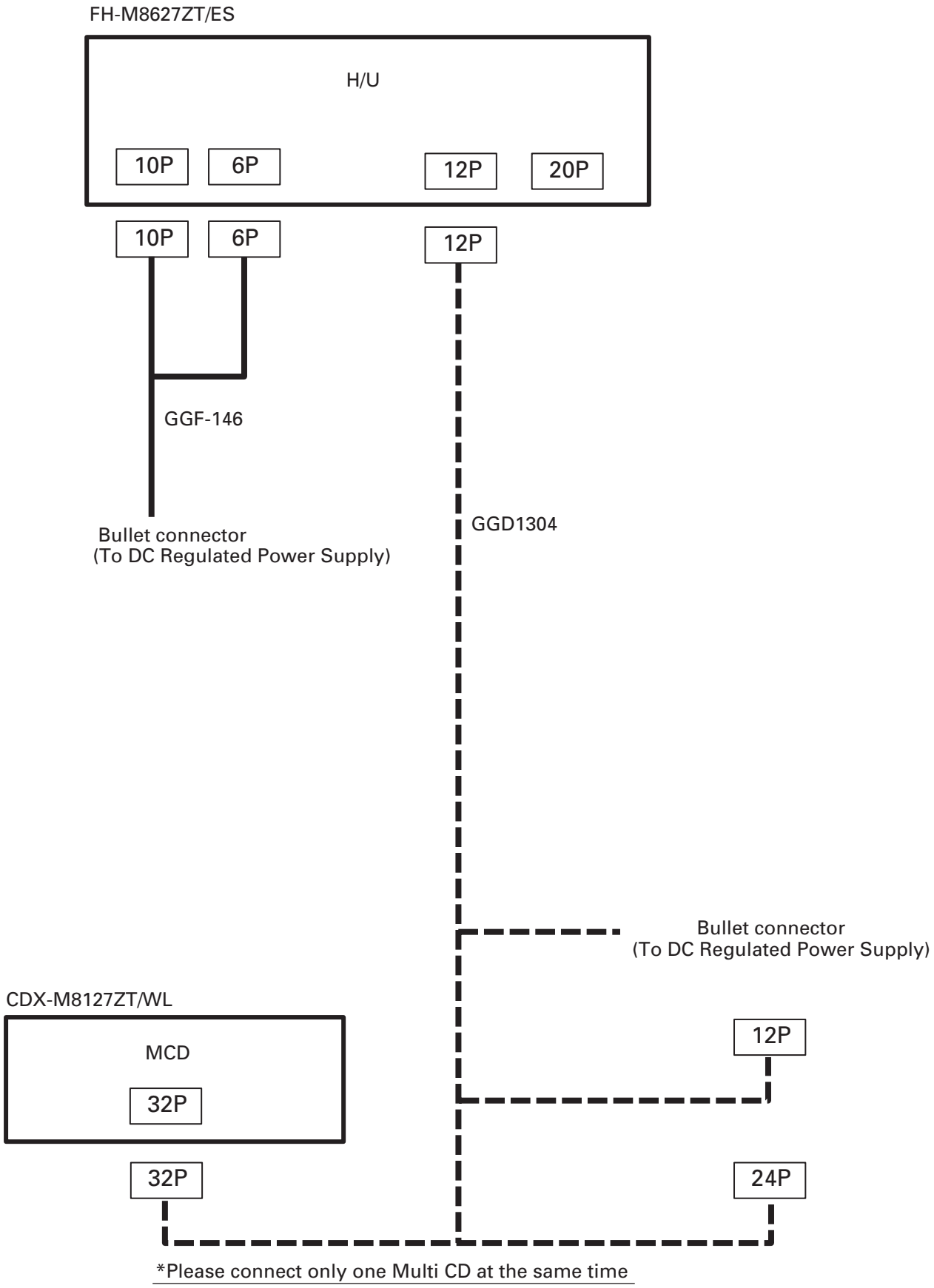


*Please connect only one Multi CD at the same time

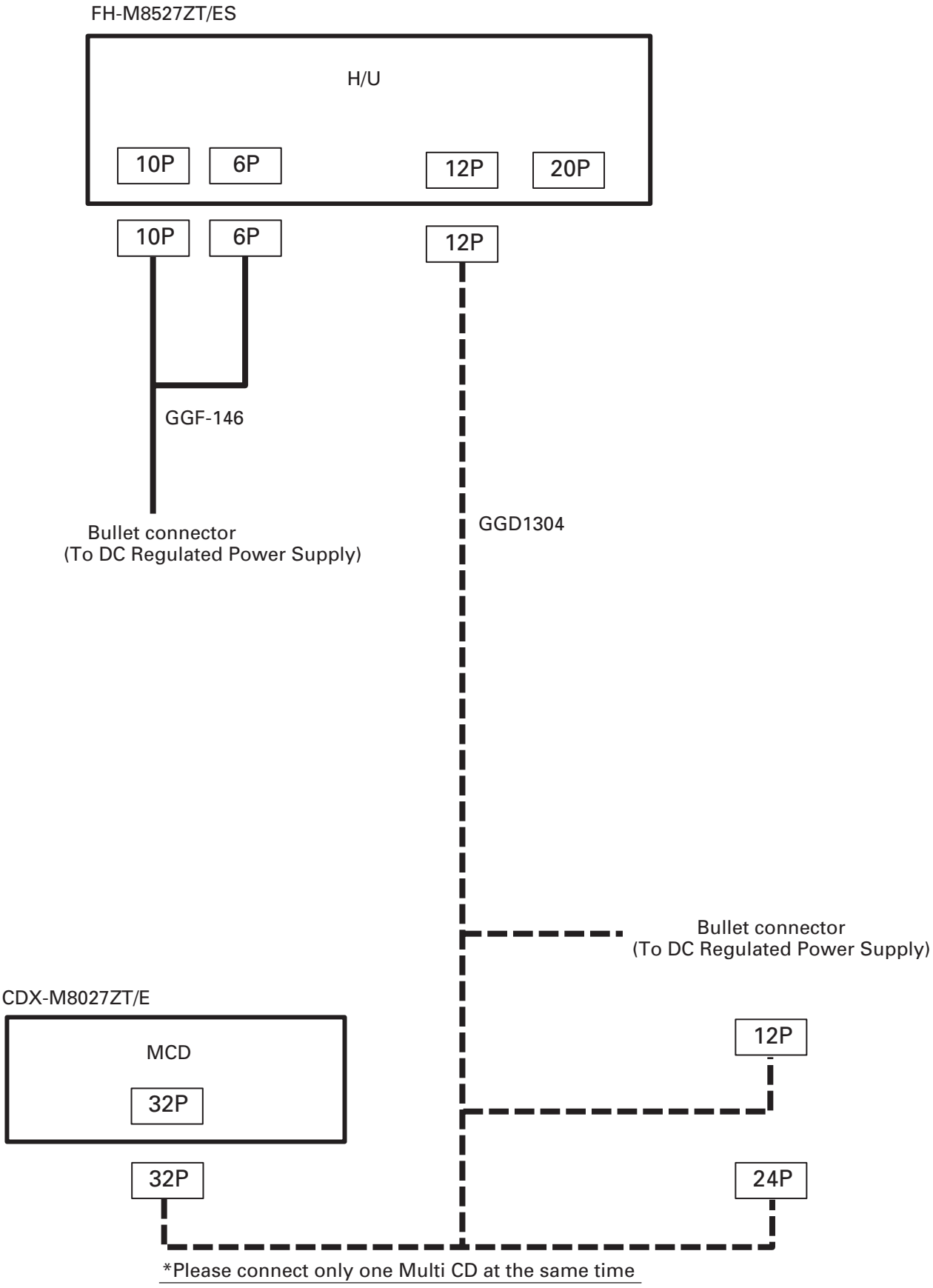
• AUSTRALIA TOYOTA STD SYSTEM



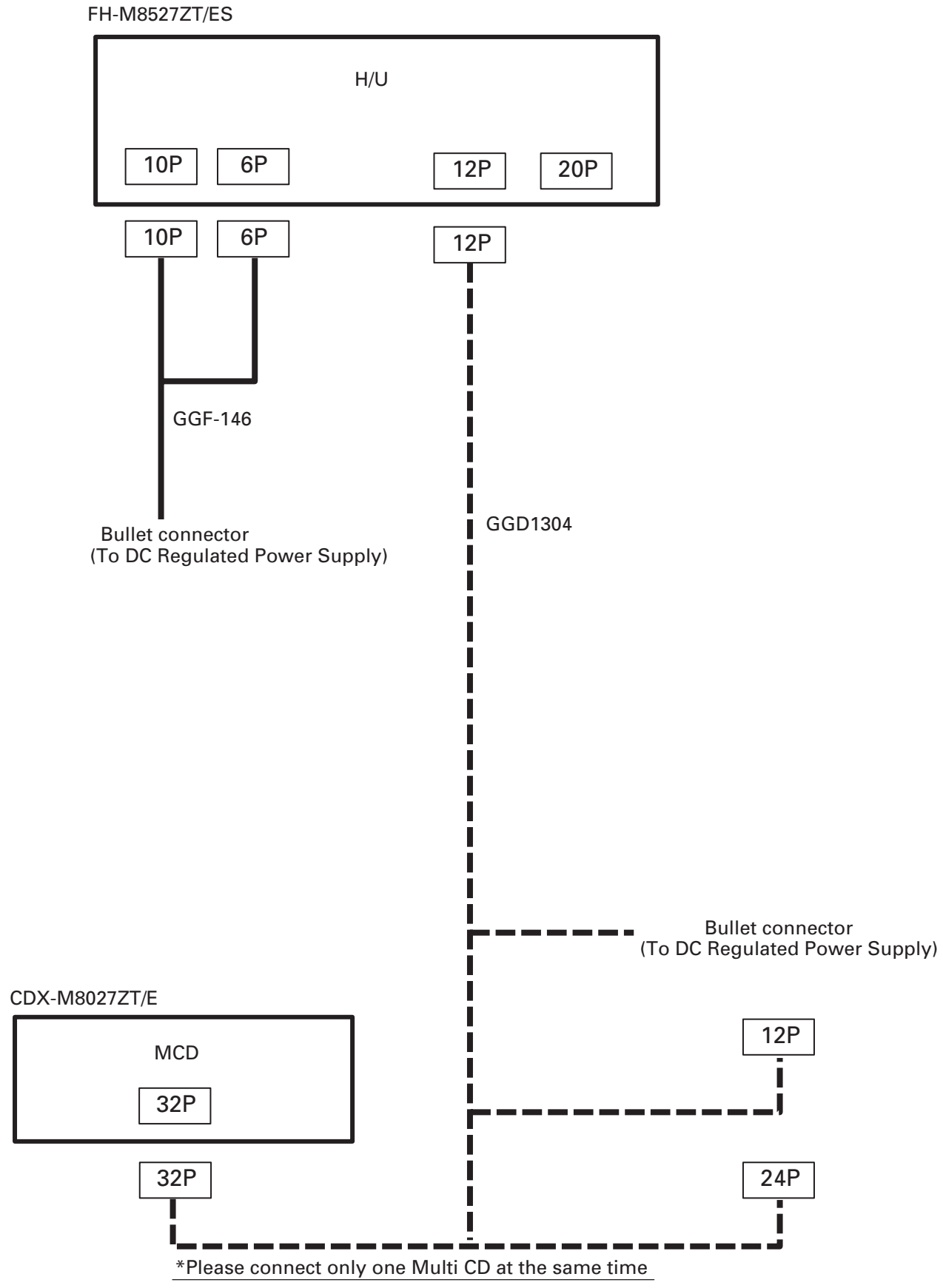
• AISIA TOYOTA(R) STD SYSTEM



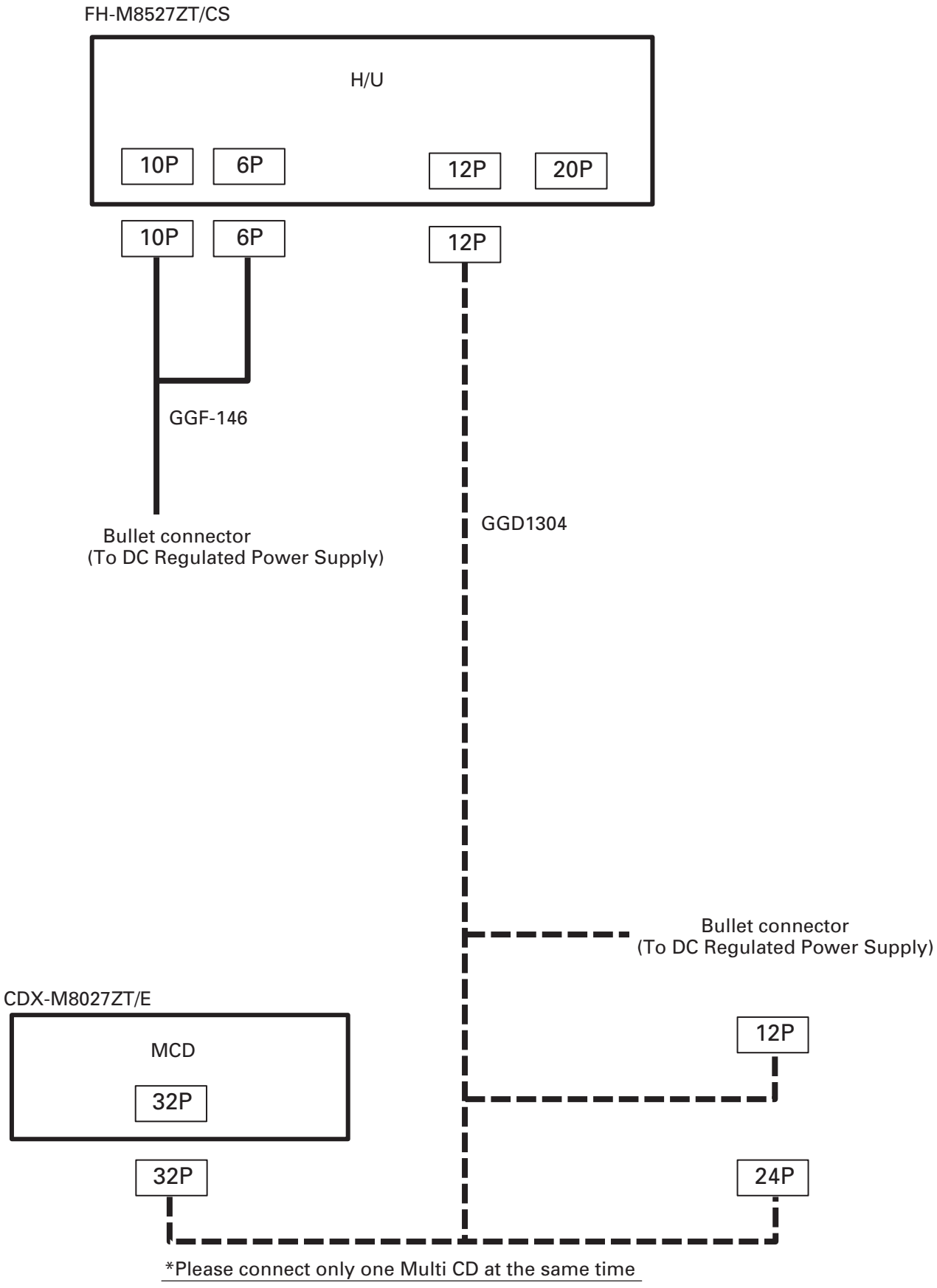
• AISIA TOYOTA(L) STD SYSTEM



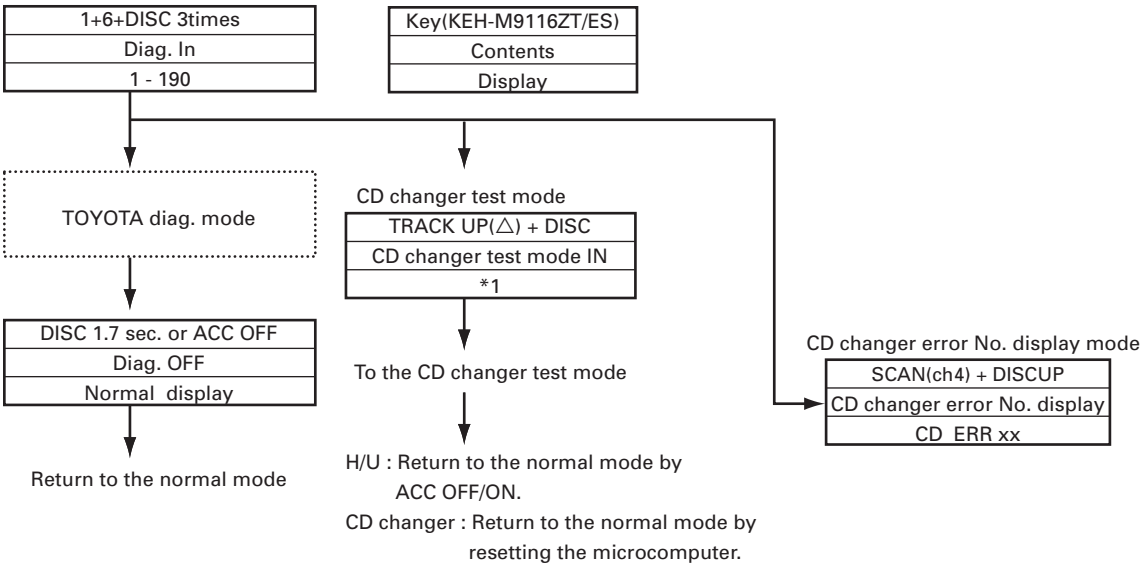
• MIDDLE EAST LEXUS STD SYSTEM



• SOUTH AND CENTRAL AMERICA TOYOTA STD SYSTEM



● How To Enter Into The Test Mode



*1 : It depends on TOYOTA diag. mode.

6.1 CD ADJUSTMENT

1)Precautions

- This unit uses a single power supply (+5V) for the regulator. The signal reference potential, therefore, is connected to REFO(approx. 2.5V) instead of GND.
  If REFO and GND are connected to each other by mistake during adjustments,not only will it be impossible to measure the potential correctly,but the servo will malfunction and a severe shock will be applied to the pick-up. To avoid this,take special note of the following.
  Do not connect the negative probe of the measuring equipment to REFO and GND together. It is especially important not to connect the channel 1 negative probe of the oscilloscope to REFO with the channel 2 negative probe connected to GND.
  Since the frame of the measuring instrument is usually at the same potential as the negative probe,change the frame of the measuring instrument to floating status.
  If by accident REFO comes in contact with GND,immediately switch the regulator or power OFF.

- Always make sure the regulator is OFF when connecting and disconnecting the various filters and wiring required for measurements.

- Before proceeding to further adjustments and measurements after switching regulator ON,let the player run for about one minute to allow the circuits to stabilize.

- Since the protective systems in the unit's software are rendered inoperative in test mode,be very careful to avoid mechanical and /or electrical shocks to the system when making adjustment.

- This unit is adjusted in a combination with the CD control unit (KEH-M9116ZT/ES, etc.). Each regulator key should be operated at the unit.
  With the KEH-M9116ZT/ES taken up for reference, a description will be given below concerning how to enter into the test mode, including key operations. The key in the adjustment text is also one of the KEH-M9116ZT/ES keys.

- How to enter into the test mode
  See the test mode flow chart Page 44.

- Resetting the test mode
  Reset to the unit.

- Disc detection during loading and eject operations is performed by means of a photo transistor in this unit.Consequently,if the inside of the unit is exposed to a strong light source when the outer casing is removed for repairs or adjustment,the following malfunctions may occur.
  * During PLAY, even if the eject button is pressed,the disc will not be ejected and the unit will remain in the PLAY mode.
  * The unit will not load a disc.
    When the unit malfunctions this way,either re-position the light source,move the unit or cover the photo transistor.

- When loading and unloading discs during adjustment procedures,always wait for the disc to be properly clamped or ejected before pressing another key. Otherwise, there is a risk of the actuator being destroyed.

- Turn power off when pressing the button **FF** or the button **REV** key for focus search in the test mode. (Or else lens may stick and the actuator may be damaged.)

- SINGLE/4TRK/10TRK/32TRK will continue to operate even after the key is released.Tracking is closed the moment C-MOVE is released.

- JUMP MODE resets to SINGLE as soon as power is switched off.

6.2 CHECKING THE GRATING

● Checking the Grating After Changing the Pickup Unit

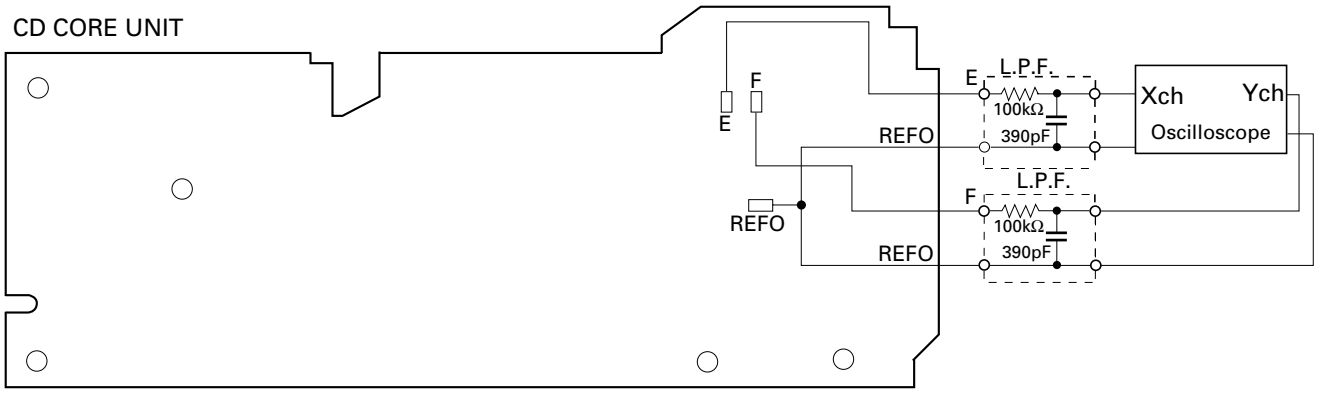
•Note :
Unlike previous CD mechanism modules the grating angle of the pickup unit cannot be adjusted after the pickup unit is changed. The pickup unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted pickup unit for the CD mechanism module. Changing the pickup unit is thus best considered as a last resort. However, if the pickup unit must be changed, the grating should be checked using the procedure below.

•Purpose :
To check that the grating is within an acceptable range.

•Symptoms of Mal-adjustment :
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or track searching taking a long time, may appear.

•Method :

•Measuring Equipment	•Oscilloscope, Two L.P.F.
•Measuring Points	•E, F, REFOUT
•Disc	•ABEX TCD-784
•Mode	•TEST MODE



•Checking Procedure
1. In test mode, load the disc and switch the 5V regulator on.
2. Using the **TRACKUP** and **TRACKDOWN** buttons, move the pickup unit to the innermost track.
3. Press key **RPT(ch5)** to close focus, the display should read "91". Press key **DISCDOWN** to implement the tracking balance adjustment the display should now read "81". Press key **RPT(ch5)** 4 times. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the pickup unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

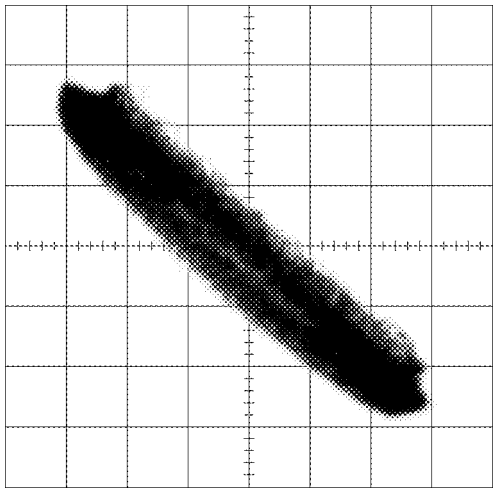
•Note
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

•Hint
Reloading the disc changes the clamp position and may decrease the "wobble".

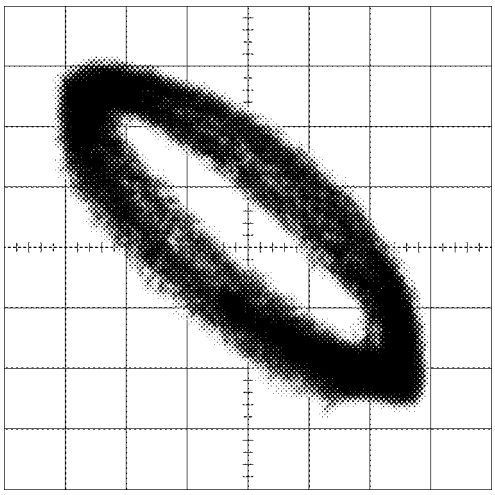
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

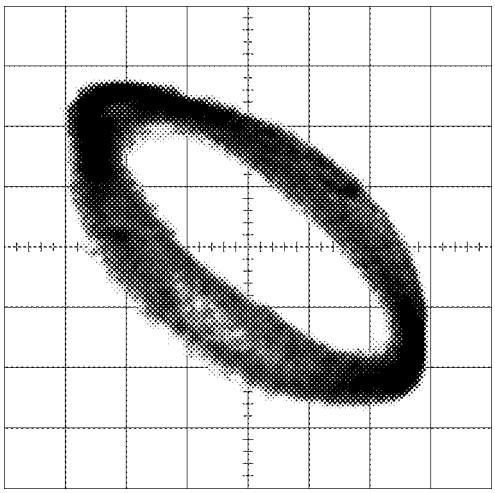
0°



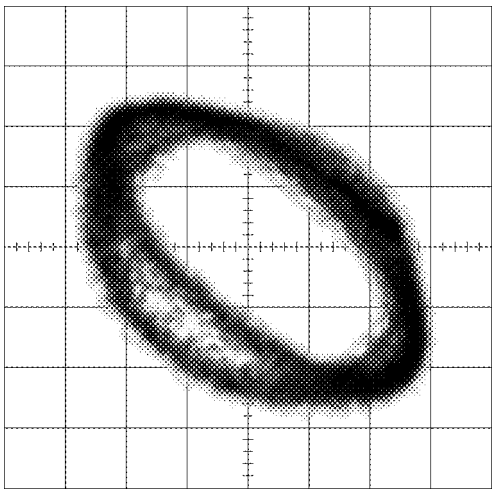
30°



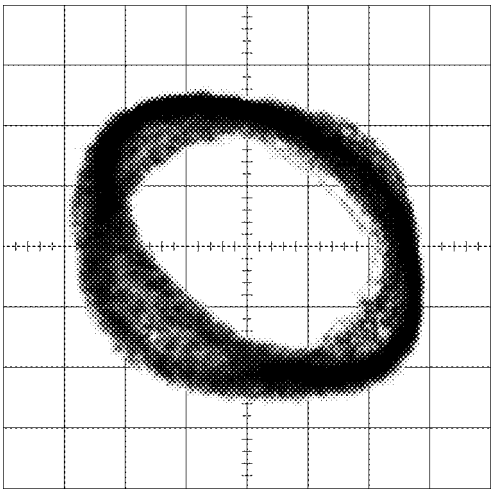
45°



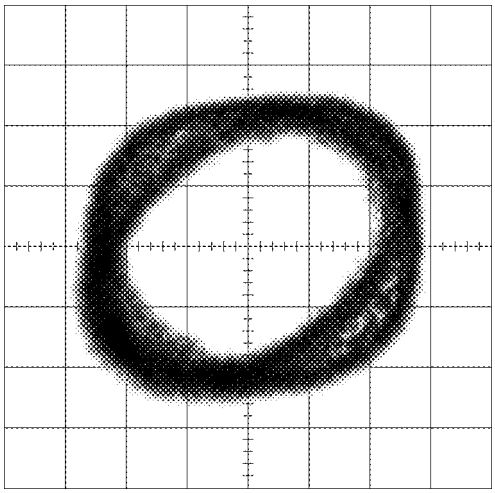
60°



75°



90°



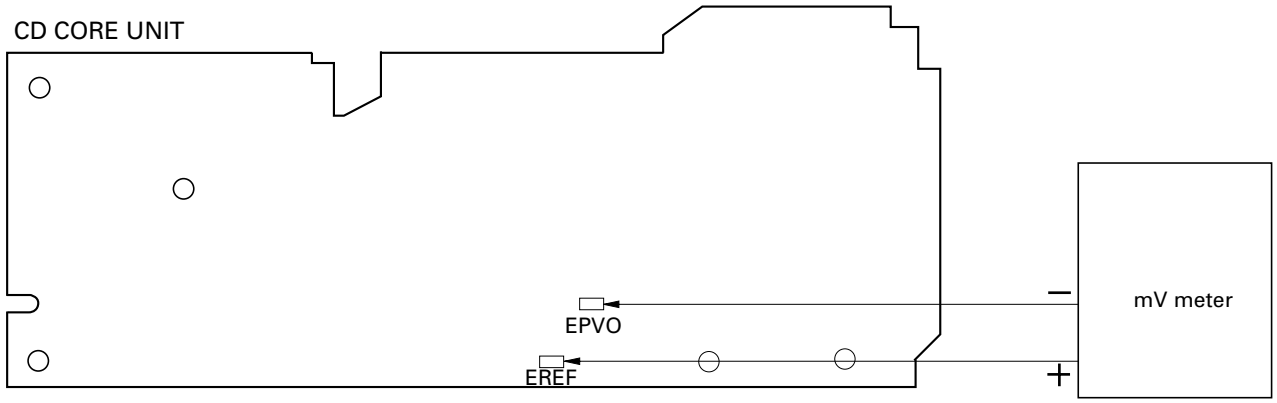
6.3 ADJUSTMENT OF ELEVATION WHEN THE CD CORE UNIT HAS BEEN REMOVED FOR MAINTENANCE

● Adjustment When Error Code 60 is Displayed Because of Malfunctioning Elevation

•Note :
Unlike the conventional mechanisms, the new mechanism detects the height of the stage using slide-variable resistance.
To absorb dislocation of the stage height caused by differences in the mechanism and the CD core unit, adjustment must be made for each CD-mechanism module using a variable resistor.
Normally, readjustment is not needed, as this has been adjusted at the factory. However, adjustment of elevation is required according to the procedure explained below if an elevation error has occurred or if the CD core unit has been removed.

•Purpose :
To adjust and confirm whether or not elevation operates correctly.

•Adjustment Method :
•Measuring Equlpment: Millivoltmeter
•Measuring Points : EREF, EPVO
•Setting : Without a magazine in Test mode
With the mechanism placed upside-down (Place the CD mechanism module so that the CD core unit is above.)



•Confirmation Procedure

1. Enter Test mode, then select Multi-CD player.
2. Press key **RDM(ch6)** to enter Mechanism Test mode.
3. Press key **ch1** twice to specify the amount of movement.

Examples of display

TRACK	FUNCTION
	' "

TRACK	FUNCTION
72	00' 00"

The amount of movement changes each time key **ch1** is pressed.

maximum movement
↑ Key **ch1**
↑ during movement
Key **ch1** ↑ Key **ch1**
↑ minimum movement

TRACK	FUNCTION
72	00' 02"

TRACK	FUNCTION
72	00' 01"

TRACK	FUNCTION
72	00' 00"

Examples of display

4. Press key **RPT(ch5)** to set ELV/TRAY mode to TRAY.

TRACK	FUNCTION
72	10' 02"

5. Press key **TRACKUP** to release the clamp and return the tray to the magazine.

Release the clamp

6. Press key **RPT(ch5)** to enter Elevation Move mode.

TRACK	FUNCTION
72	00' 02"

7. Use key **TRACKUP/DOWN** to operate elevation and set if to the graduation of the fourth step (Fig. 1).

8. Make the adjustment.
   Use VR802 to adjust the difference in potential between EREF and EPVO to 0 ±20 mV.

9. When adjustment is completed, press key **SCAN(ch4)** to exit Mechanism Test mode.

TRACK	FUNCTION
72	00' 02"

10. Confirm operation of the mechanism.
    Place the mechanism horizontally (CD core unit below). Take care not to short-circuit the PCB.

TRACK	FUNCTION
	' "

11. Confirm the height of the stage. Use the DISCUP key to select Disc No.4.

TRACK	FUNCTION
04	00' 00"

    Check if the stopper bend of the clamp lever is engaged in the groove of the frame stopper (Fig. 2-4).

•Note :
The stopper bend will be pressed downward into the groove for final clamping. Confirm the engagement position of the stopper bend.

•If the stopper bend is engaged in the center and pressed downward, adjustment is completed. Go to step 15.

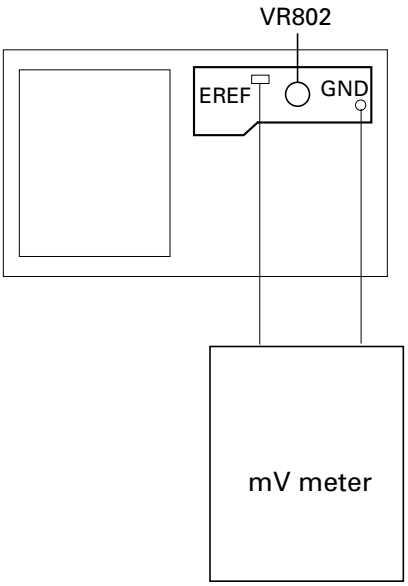
•If the stopper bend is dislocated, check the amount of dislocation by following steps 12 to 14.

12. To see the amount of dislocation, place the mechanism upside-down. If the stopper bend has been dislocated in the direction of the first CD, turn VR802 to the left(Fig. 2).

    To lower the stage toward the sixth step by 0.1 mm, reduce the voltage of EREF (adjusted in step 8) by 20 mV.

    If the stopper bend has been dislocated in the direction of the sixth CD, turn VR802 to the right(Fig. 4).

    To raise the stage toward the first step by 0.1 mm, increase the voltage of EREF (adjusted in step 8) by 20 mV.



13. Place the mechanism horizontal. Go back to step 11 to reconfirm the stage height.

14. When adjustment of the stage height is completed, proceed as follows:

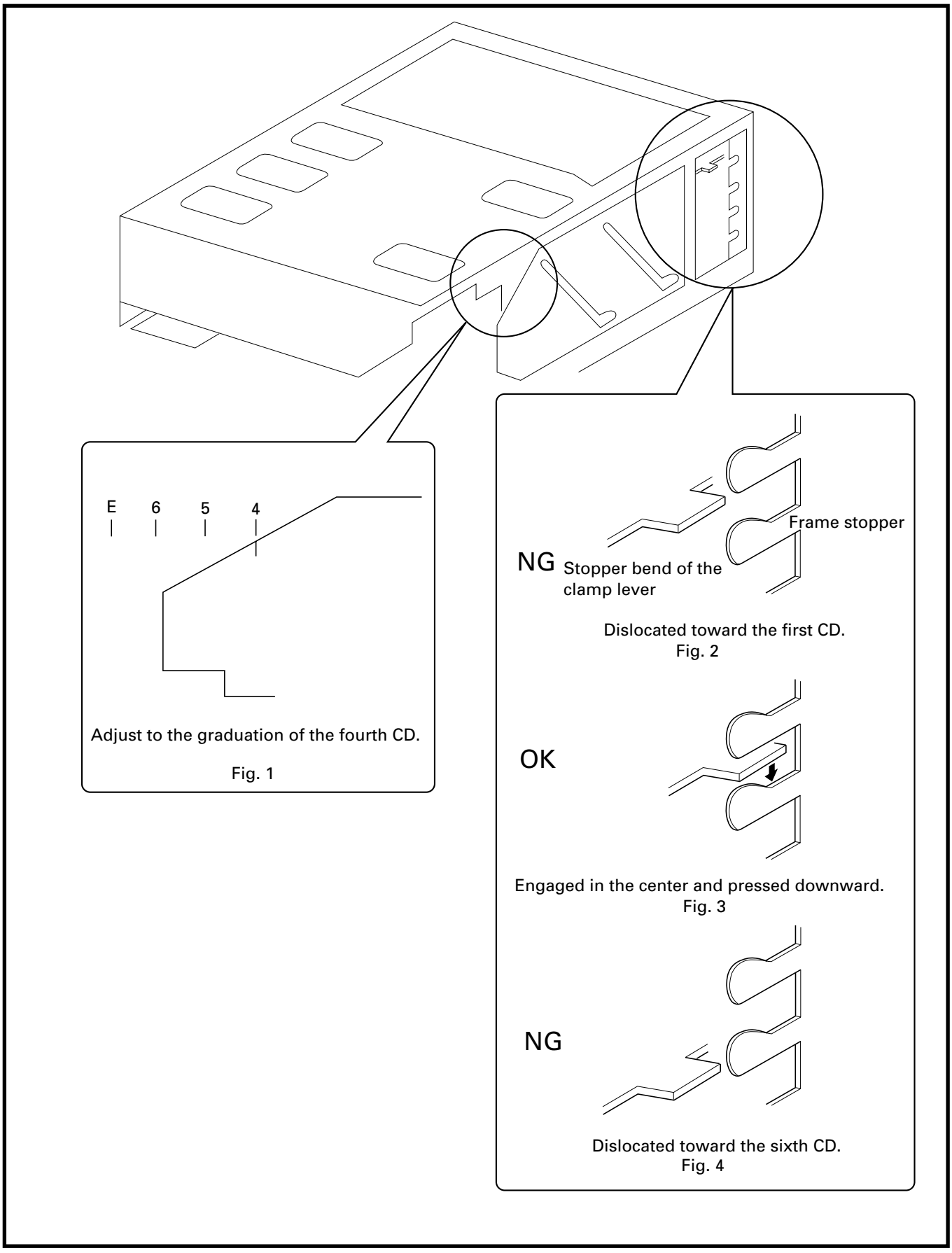
15. Press the **EJECT** switch.

16. Once operation of the mechanism has stopped, turn the power OFF.

17. Wait more than one minute after the power is turned off, then turn the power ON and insert a magazine.

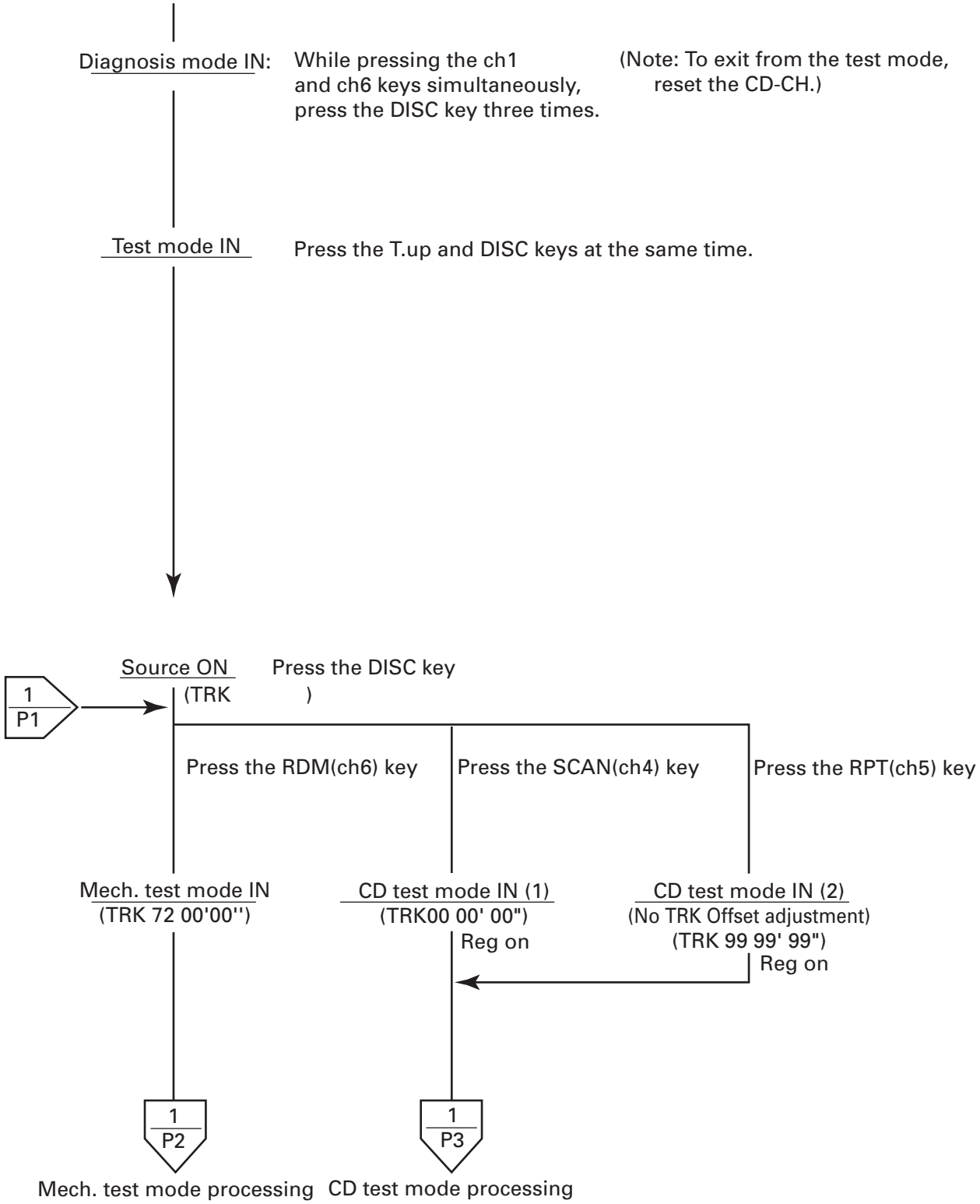
18. Check if the mechanism operates correctly with the first and fourth CDs.

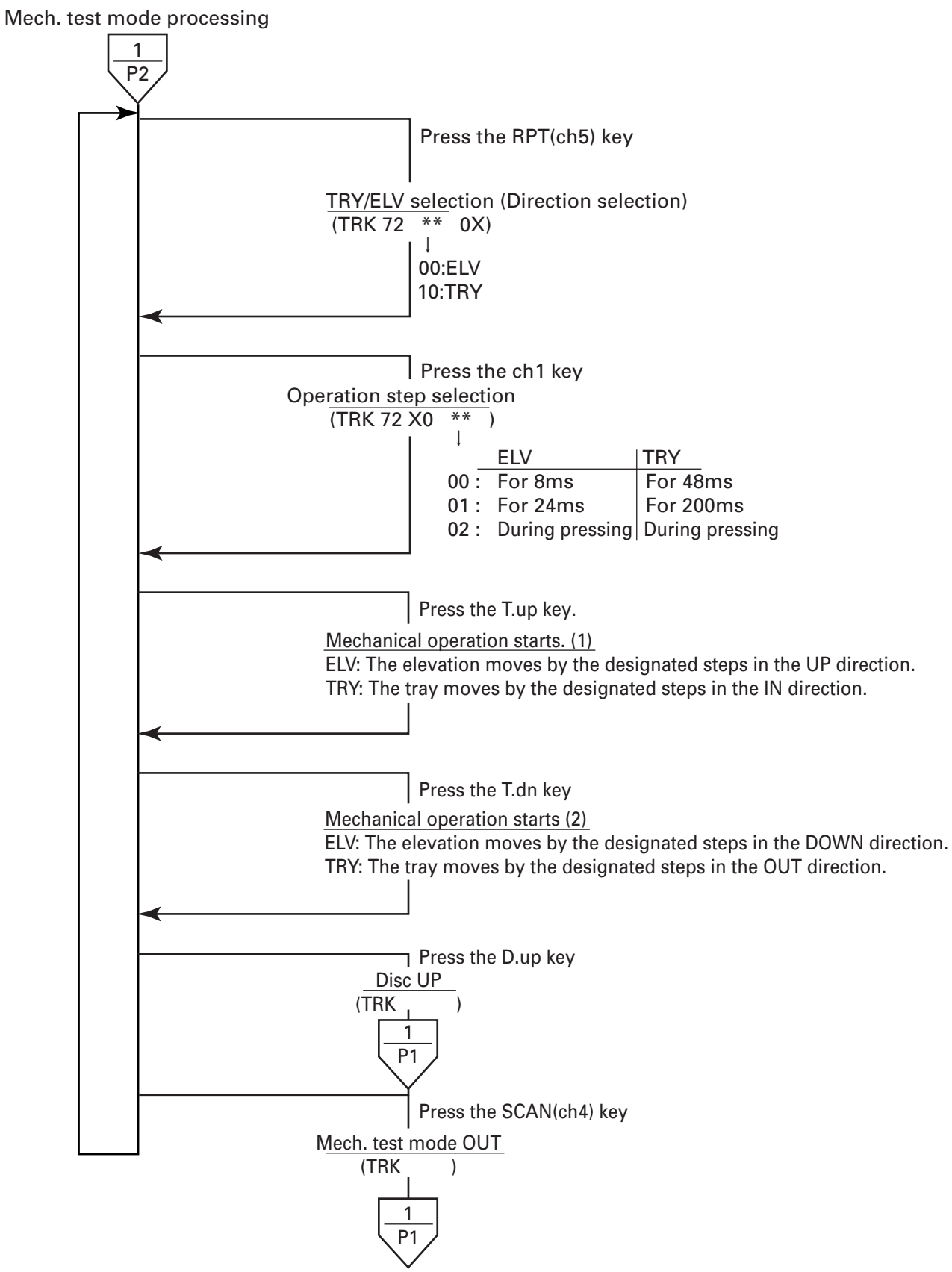
19. If the mechanism operates properly, adjustment is completed. If the mechanism operates improperly, make the adjustment again.


E
6
5
4
Adjust to the graduation of the fourth CD.
Fig. 1
Frame stopper
NG
Stopper bend of the clamp lever
Dislocated toward the first CD.
Fig. 2
OK
Engaged in the center and pressed downward.
Fig. 3
NG
Dislocated toward the sixth CD.
Fig. 4

6.4 TEST MODE

● **Flow Chart**




Mech. test mode processing
1
P2
Press the RPT(ch5) key
TRY/ELV selection (Direction selection)
(TRK 72 ** 0X)
00:ELV
10:TRY
Press the ch1 key
Operation step selection
(TRK 72 X0 **)
ELV
TRY
00 : For 8ms
For 48ms
01 : For 24ms
For 200ms
02 : During pressing
During pressing
Press the T.up key.
Mechanical operation starts. (1)
ELV: The elevation moves by the designated steps in the UP direction.
TRY: The tray moves by the designated steps in the IN direction.
Press the T.dn key
Mechanical operation starts (2)
ELV: The elevation moves by the designated steps in the DOWN direction.
TRY: The tray moves by the designated steps in the OUT direction.
Press the D.up key
Disc UP
(TRK)
1
P1
Press the SCAN(ch4) key
Mech. test mode OUT
(TRK)
1
P1

CD test mode processing

1/P3

* When the D.up key is pressed, the DISC UP mode is selected.
(The mode changes from the CD test mode into the 1/P1 mode.)

Press the RPT (ch5) key
Focus close /S curve/ F.EQ measurement (TRK 91 91'91")

Press the ch1 key
Focus mode selection
Focu close : (TRK 00 00' 00")
S curve : (TRK 01 01' 01")
F.EQ measurement: (TRK 02 02' 02")

Press the RDM(ch6) key
Tracking servo close
Without T.OFF adj. : (TRK 99 99' 99")
With T.OFF adj. : (TRK 00 00' 00")

Press the T.up key
CRG (+)
(The same display with that for the TRK servo close)

Press the T.dn key
CRG (-)
(The same display with that for the TRK servo close)

Press the SCAN(ch4) key
CD test mode OUT (TRK)
Reg OFF

1/P1

Press the RDM(ch6) key
Tracking close
AGC, applicable servo
(TRK XX XX' XX")

Press the ch1 key
Tracking close
No AGC, applicable servo
(TRK XX XX' XX")

Press the RPT(ch5) key
Auto adj. value display /Rough servo
F. Cancel display
T. OFFSET display
T. Bal display
Rough Servo

Press the T.up key
CRG+
(TRK 8X 8X' 8X")
(TRK 9X 9X' 9X")

Press the T.dn key
CRG-
(The same display with that for the DRG (+))

Press the D.dn key
Tracking balance adjustment
(TRK 8X 8X' 8X")

Press the SCAN(ch4) key

Press the RDM(ch6) key
AGC/F.BIAS display selection
Normal display
F.AGC gain
T.AGC gain
F.BIAS setting value

Press the RPT(ch5) key
AGC
(TRK XX XX XX)

Press the ch1 key
CRG/TR jump no. selection
(TRK XX XX XX)
* The mode changes as follows (with no display change):
Single
4TR
10TR
32TR
100TR
CRG Move

Press the T.up key
CRG/TR jump (+)
(TRK XX XX' XX")

Press the T.dn key
CRG/TR jump (-)
(TRK XX XX' XX")

(*4)
Release the key
While pressing the key (*4)

Press the D.dn key
Tracking Open
(TRK 8X 8X' 8X")
(TRK 9X 9X' 9X")

Note (*4): Only for the CRG move and 100TR jump modes

1. AGC gain display (current and initial) X20
2. F.BIAS, F.Cancel, T.OFFSET and T.Bal values= (the upper 8bits of the setting value (7F(h) + 80(h) + 128) / 4
   = 63(d) – (32(d)) – 00(d)
3. Never press any key except for the EJECT and the Disc change keys during the disc change or eject mode.
4. If the TRK (+) or TRK (-) key should be pressed during the Focus search mode, turn off the power swiftly to prevent the actuator from being damaged.

● Error Number Indication

If the CD should fail to operate or if an error has taken place during operation the player will enter into the error mode, and the cause of the error will be numerically indicated.
This is aimed at assisting in analysis or repair.

(1) Basic Means of Display

•Examples of Display ERROR-xx

(2) Error Codes

Error Code	Classification	Description	Cause/Detail
10	ELECTRIC	Carriage home failure	Carriage doesn't move to or from the innermost position →Home switch failed and/or carriage immobile
11	ELECTRIC	Focus failure	Focus failed →Defects, disc upside-down, severe vibration
12	ELECTRIC	Spindle failed to lock	Spindle failed to lock or subcode unreadable →Spindle defective, defect, severe vibration
14	ELECTRIC	Mirror failure	Unrecorded CD-R The disc is upside-down, defects, vibration
17	ELECTRIC	Set up failure	AGC protect failed →Defects, disc upside-down, severe vibration
19	ELECTRIC	Set up failure	Tracking error waveform is too unbalanced (>50%) or level is too small →The pickup unit or tracking error circuitry is N.G.
30	ELECTRIC	Search time out	Failed to reach target address →Carriage/tracking defective and/or defects
A0	SYSTEM	Power failure	Power overvoltage or short circuit detected →Switching transistor defective and/or power abnormal
A1	SYSTEM	Mechanism power failure	Mechanism elevation reference voltage is out of prescription →EREF adjustment VR and/or power abnormal
50	MECHANISM	An error upon ejection	MAG switch release time has time out Elevation time out when eject
60	MECHANISM	An error while putting in and out the tray	Tray in / out time has time out Tray is caught when put in
70	MECHANISM	An error upon elevation	Elevation time has time out
80	MECHANISM	An error with an empty magazine inserted	No disc is available

6.5 DIAGNOSIS CODE TABLE

Logical address name	Logical address value	Diagnosis codes	Diagnosis details	Remarks
CD-CH	43H	44	CD error	
CD-CH	43H	45	EJECT error	
CD-CH	43H	46	Non-recorded side, scratches on a disc	
CD-CH	43H	47	CD high temperature detection	
CD-CH	43H	48	Excessive current error	
CD-CH	43H	50	Tray IN/OUT error	
CD-CH	43H	51	Elevation error	
Communication control	01H	D6	Master absent	
Communication control	01H	D7	Connecting confirmation error	
Communication control	01H	DC	Transmission failure	
Communication control	01H	DD	Master reset (intermission)	
Communication control	01H	DF	Master error (shifting to the sub master)	
Communication control	01H	E0	Registration completion acknowledgement error	
Communication control	01H	E2	ON/OFF command parameter error	
Communication control	01H	E3	Registration requirement transmission	

Physical address table (1/4)

Uppermost 4 bits (1) Control units

L \ H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	M.Disp Comp.	New EMV	New device with AV	New MM ECU	device with AV	~~1DIN-TV~~	~~EMV~~		Audio ECU	Audio H/U		Rear TV	Rear Control SW	Multi-CD decoder	CD-CH commander	AMP controlled radio tuner
1																
2													Europe GW ECU			
3																
4												1DIN Navigation	Consolida -ted inside panel	Simple LCD	Consolid -ated SW	
5																
6													Gateway ECU			
7																
8			New 1DIN-TV		Europe navigation Disp.M/U		Rear TV with movie mode	Navigation with controls				Disp with SW	FM multiplex Disp	Fr controlled SW	MD-CH commander	
9																
A																
B																
C								MONET ECU					Steering SW	Navigation remote controller	Body computer	
D																
E								Vehicle information ECU								
F																

Physical address table (2/4)

Uppermost 4 bits (2) Video output units

L \ H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Navigation computer	ATIS	VICS	TV tuner	Hideaway CD-CH	Hideaway DVD-CH	TEL information ECU		Camera controller							
1																
2																
3																
4																
5																
6																
7																
8						DVD deck										
9																
A																
B																
C																
D																
E																
F																

Physical address table (3/4)

Uppermost 4 bits (3) Audio output units

L \ H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Radio		Cassette	Radio cassette with no CH controller	CD-P		1DIN CD-CH		MD-P		MD-CH		DAT		DCC	
1																
2																
3																
4																
5																
6																
7																
8																TEL ECU
9																
A																
B																
C																
D																
E																
F																

Physical address table (4/4)

Uppermost 4 bits (4) Audio processing units

L \ H	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	Equalizer				DSP				H.W AMP							
1																
2																
3																
4																
5																
6																
7																
8																
9																
A																
B																
C																
D																
E																
F																

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case Unit (Fig.1)**

1 Remove the ten screws and then remove the Case Unit.

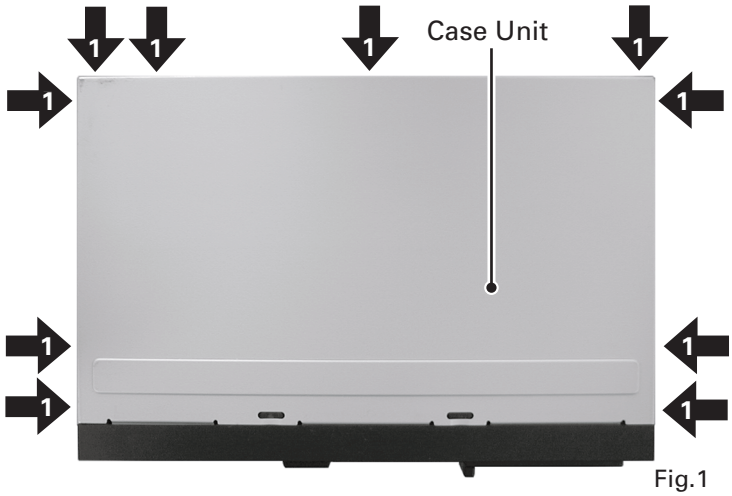


Fig.1

● **Removing the CD Mechanism Module (Fig.2)**

1 Remove the two springs.

2 Remove the four Dampers.

Disconnect the connector and then remove the CD Mechanism Module.

● **Removing the Grille Assy (Fig.2)**

3 Remove the two screws.

Disconnect the connector and then remove the Grille Assy.

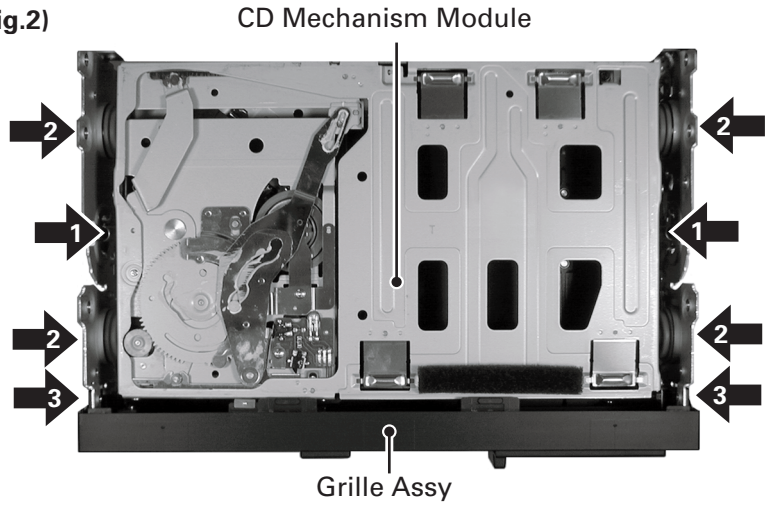


Fig.2

● **Removing the Extension Unit (Fig.3)**

1 Remove the screw.

2 Remove the two screws.

Disconnect the connector and then remove the Extension Unit.

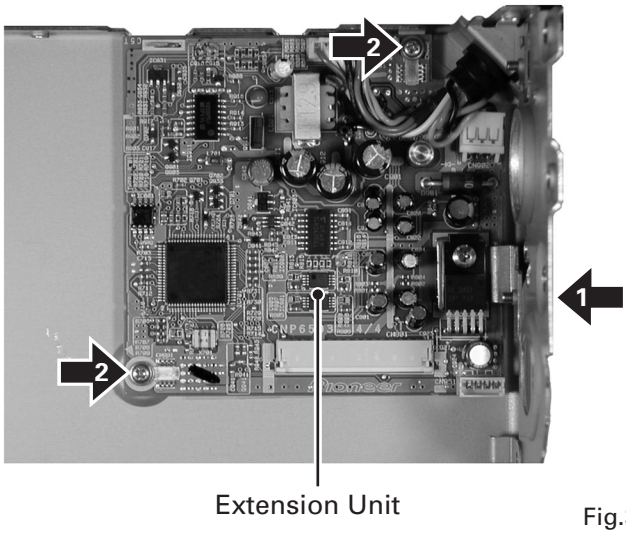


Fig.3

● Removing the Pick-up Unit

1. Attach the Short Pin onto the Flexible PCB of the Pick-up Unit. (Fig. 4)
2. Remove the Flexible PCB from the connector. (Fig. 4)
3. Remove the Torsion Spring which is pressed against the leading edge of the Feed Screw. (Fig. 5)
4. Remove the Screw and Pulley Cover. (Fig. 5)
5. Remove the Belt and the Pick-up Unit with the Feed Screw still attached. (Fig. 5)
6. Lift the Tabs of the rack section of the Holder and remove the Feed Screw. While doing so, be careful not to lose the Bearings on the ends of the Feed Screw. (Fig. 5)

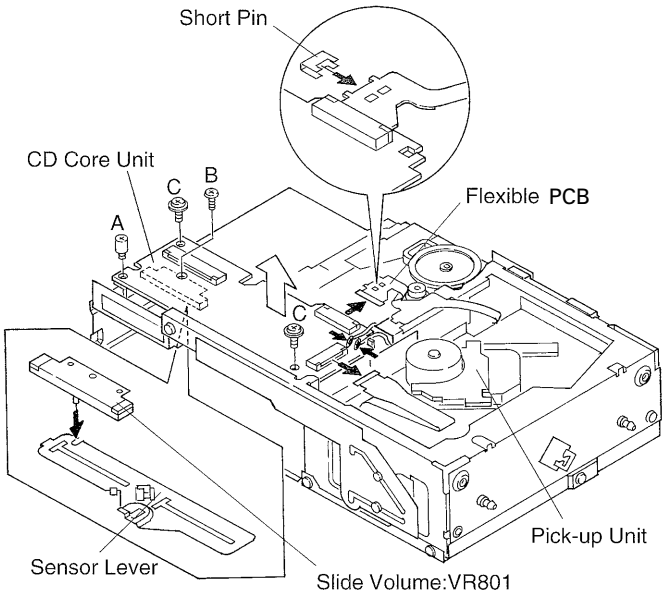


Fig. 4

● Removing the CD Core Unit (Fig. 4)

1. After procedures 1 and 2 for removing the Pick-up Unit, remove the connector.
2. Remove the Elevation Motor Assy lead wires marked with an arrow which are soldered onto the CD Core Unit.
3. Remove screw (A), screw (B) and screws (C)(2 screws), then remove the CD Core Unit.

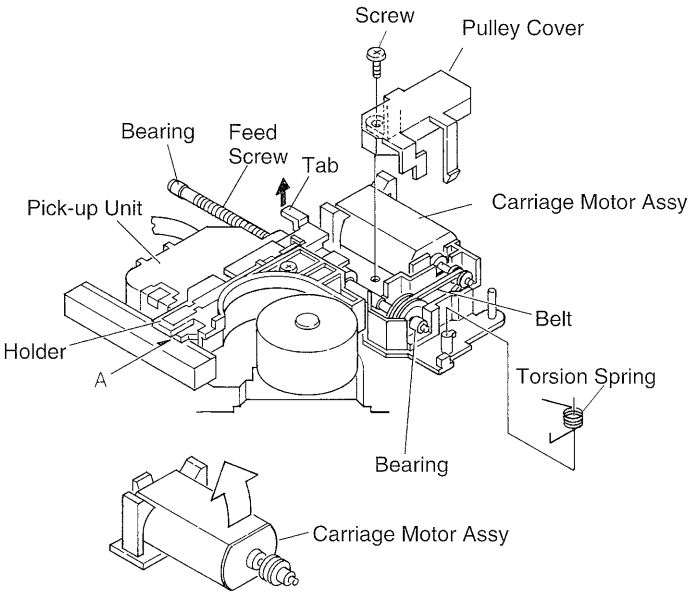
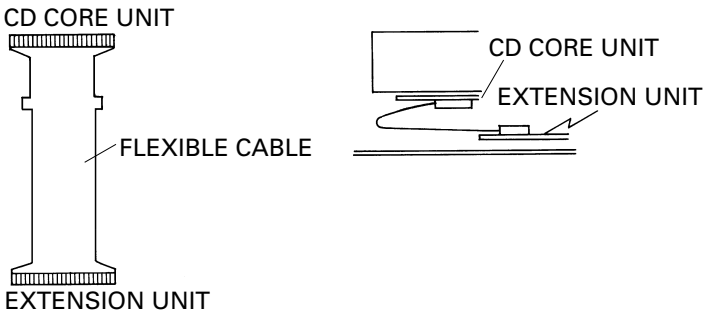
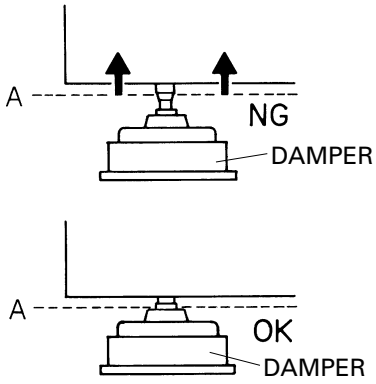


Fig. 5

● **Cautions on replacing the flexible cable** connecting between the CD core unit and extension unit: Be sure to correctly insert the flexible cable terminals into the CD core unit and extension unit as shown in the right figures. If not, the product will not operate properly.

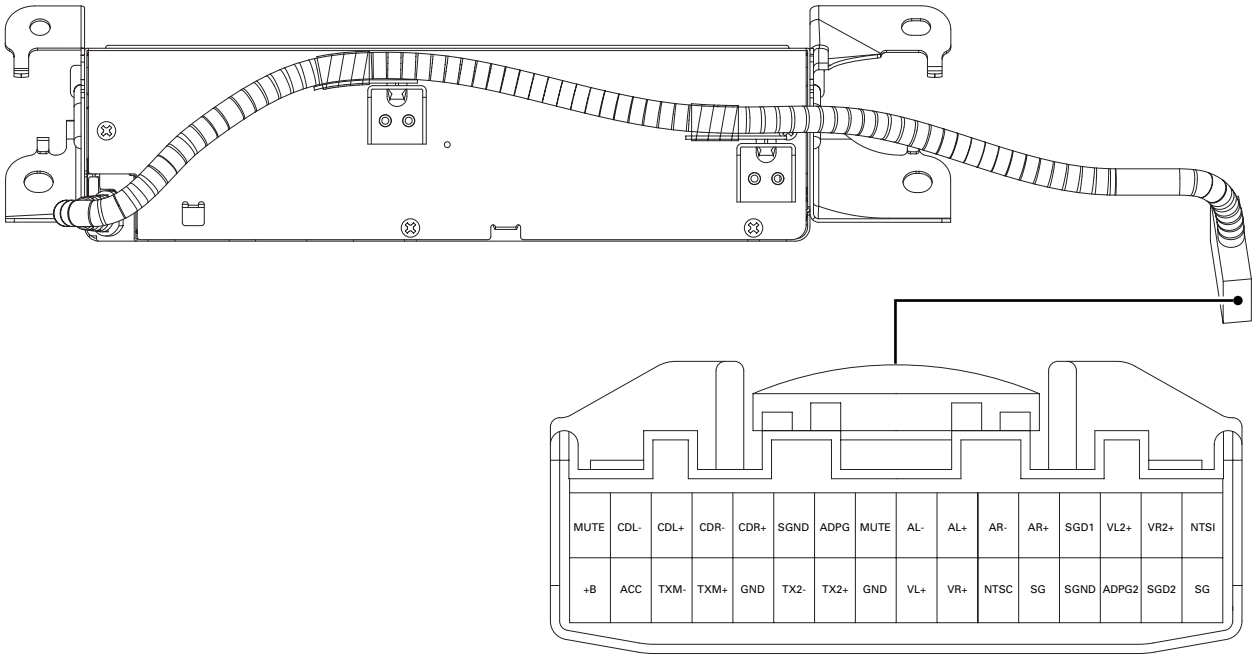


● **Cautions on replacing the dampers:**
When mounting the dampers on the CD mech module, completely insert them until the top of the damper comes to the A line as shown in the right figures. If not, the product will not operate properly.

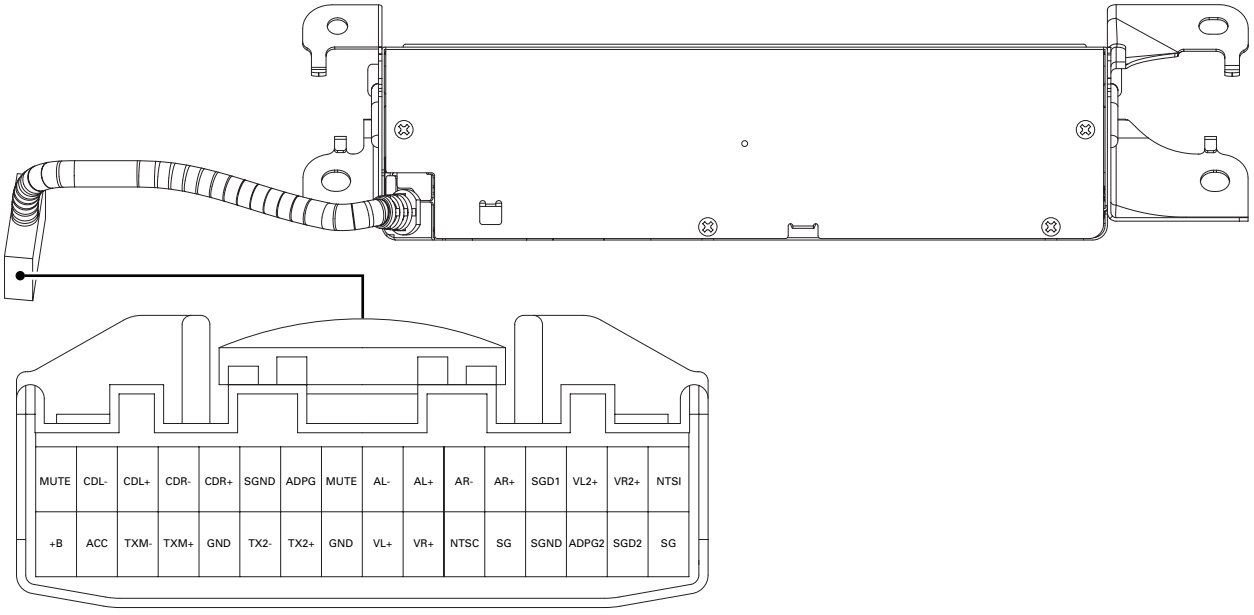


7.1.2 CONNECTOR FUNCTION DESCRIPTION

● CDX-M8127ZT/WL



● CDX-M8027ZT/E



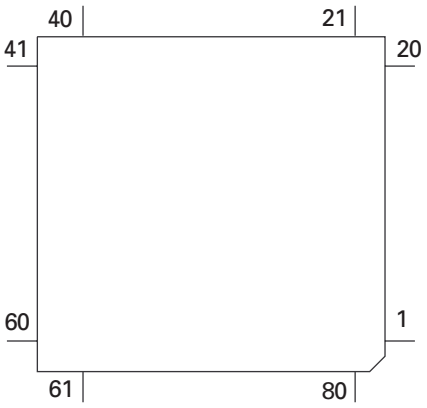
7.2 IC

● **Pin Functions (PD5765B)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1	VDIN	I		Power supply short sense input
2	NC			Not used
3	IEIN	I		AVC-LAN data input
4	IEOUT	O	C	AVC-LAN data output
5	IEPW	O	C	AVC-LAN driver power supply control output
6	XA0	O	C	LSI data detect signal output
7	XSCK	O	C	LSI clock output
8	XSO	O	C	LSI data output
9	XSI	I		LSI data input
10	$\overline{\text{XSTB}}$	O	C	LSI strobe data output
11	$\overline{\text{XRST}}$	O	C	LSI reset output
12,13	NC			Not used
14	$\overline{\text{ASENS}}$	I		ACC power sense input
15	$\overline{\text{BSENS}}$	I		Back up power sense input
16,17	NC			Not used
18	ANSW	O	C	Analog switch output
19-21	NC			Not used
22	$\overline{\text{EJSW}}$	I		Eject key switch interrupt input
23	$\overline{\text{MAG}}$	I		Magazine lock switch interrupt input
24	$\overline{\text{DCLOSE}}$	I		Door close switch input
25	$\overline{\text{RESET}}$	I		Reset input
26	POWER	O	C	VD control output
27	CONT	O	C	Servo driver power supply control
28	XIN	I		Crystal oscillating element connection pin
29	XOUT	O		Crystal oscillating element connection pin
30	VSS			GND
31-54	NC			Not used
55	CDCNT	O	C	CD +5V control output
56	$\overline{\text{EJLED}}$	O	C	Eject key illumination control output
57	SYSMUT	O	C	System mute control output
58	MIRR	I		Mirror detector input
59	LOCK	I		Spindle lock detector input
60	FOK	I		FOK signal input
61	AUDPW	O	C	ANSW power supply control output
62	$\overline{\text{SWVDD}}$	O	C	Mute circuit power supply control output
63	VMCNT	O	C	VM voltage control output
64	NC			Not used
65	I13	O	C	Motor driver control output
66	I2	O	C	Motor driver control output
67	I4	O	C	Motor driver control output
68	$\overline{\text{CDMUTE}}$	O	C	CD mute output
69	$\overline{\text{ADENA}}$	O	C	A/D converter refrence voltage control output
70	$\overline{\text{TESTIN}}$	I		Test program mode input
71	VCC			VDD (Back up 5V)
72	VREF	I		A/D converter reference voltage input
73	AVSS			A/D converter GND
74,75	NC			Not used
76	DISK	I		Disc detector input
77	ELVPVO	I		Voltage input from ELV position sense
78	ELVREF	I		ELV reference voltage input
79	MSW	I		Disc detect timing input and tray position sense input
80	TEMP	I		Temperature detector

Format	Meaning
C	C MOS

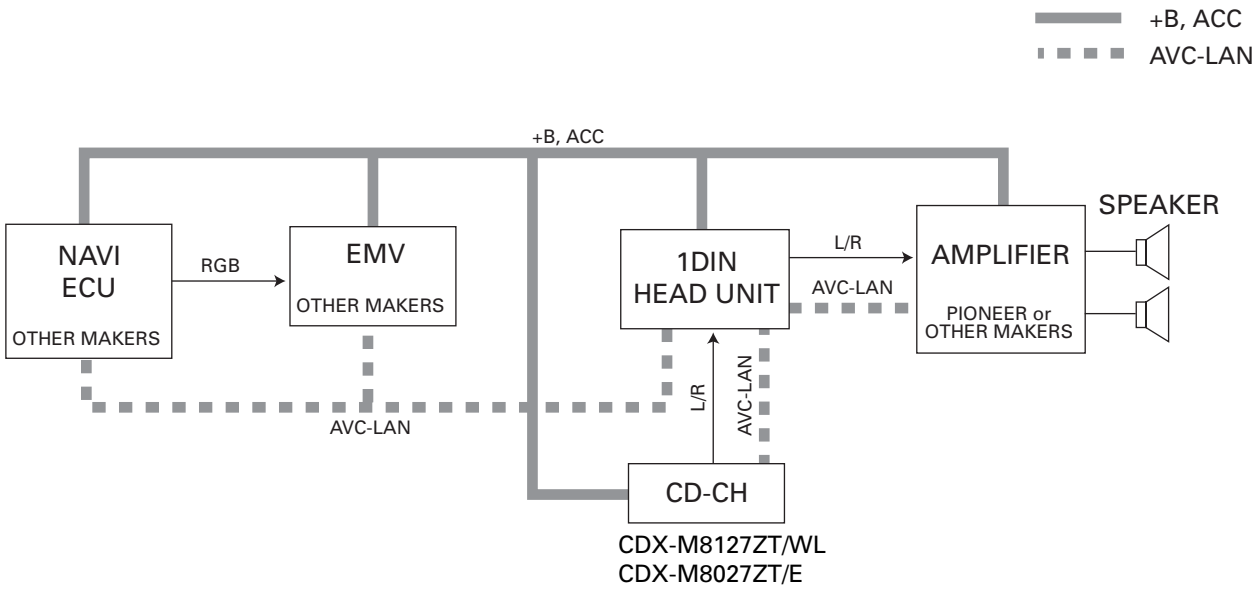
*PD5765B



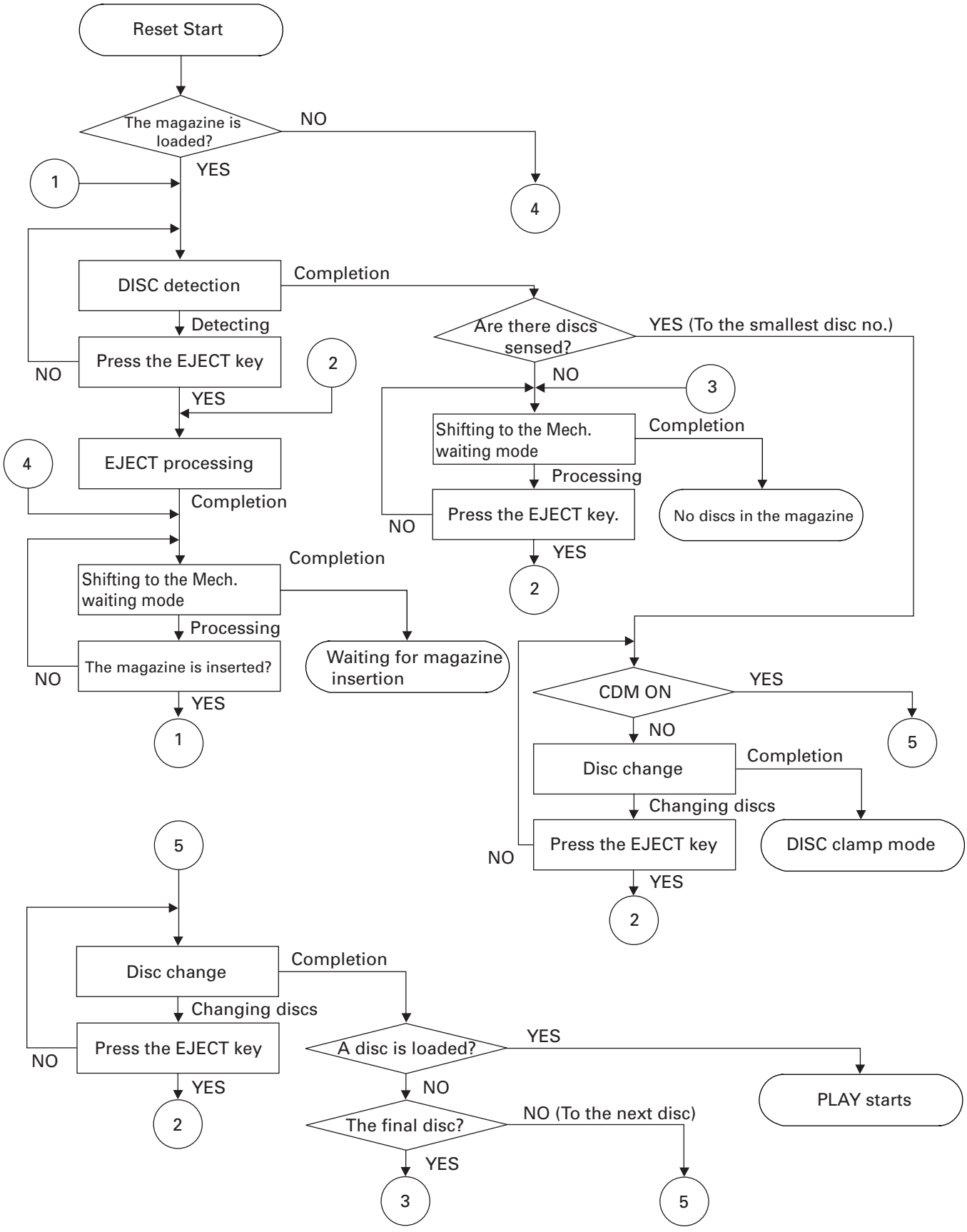
IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

7.3 EXPLANATION

7.3.1 SYSTEM BLOCK DIAGRAM



7.3.2 OPERATIONAL FLOW CHART

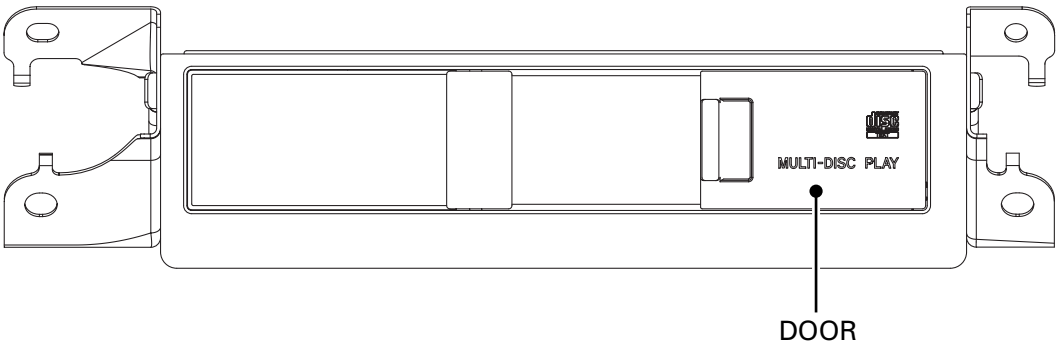


7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. OPERATIONS



* This unit ejects the magazine when you fully open the DOOR.
(This unit always allows you to eject the magazine when it is in backed-up state.)

PIONEER CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O.Box 1760, Long Beach, CA 90801-1760 U.S.A.
PIONEER EUROPE NV Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE.LTD. 253 Alexandra Road, #04-01, Singapore 159936

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